GAS COMPANY ROAD SOLAR ENERGY STORAGE PROJECT

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

Lead Agency

City of Taft
209 East Kern Street
Taft, CA 93268

Prepared by

MIG, Inc.
1650 Spruce Street, Suite 102
Riverside, CA 92507

June 16, 2020

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
AB	Assembly Bill
ADA	Americans with Disabilities Act
AFY	Acre Feet Per Year
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
BAU	Business As Usual
BESS	Battery Energy Storage System
BGS	Below Ground Surface
BTU	British Thermal Unit
CA	California
CAA	Clean Air Act
Cal-EPA	California Environmental Protection Agency
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CNRA	California Natura Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
F	Fahrenheit
GHG	Greenhouse Gas(es)
GPM	Gallons Per Minute
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HFCs	Hydrofluorocarbons
HR	Hour
IPCC	Intergovernmental Panel on Climate Change

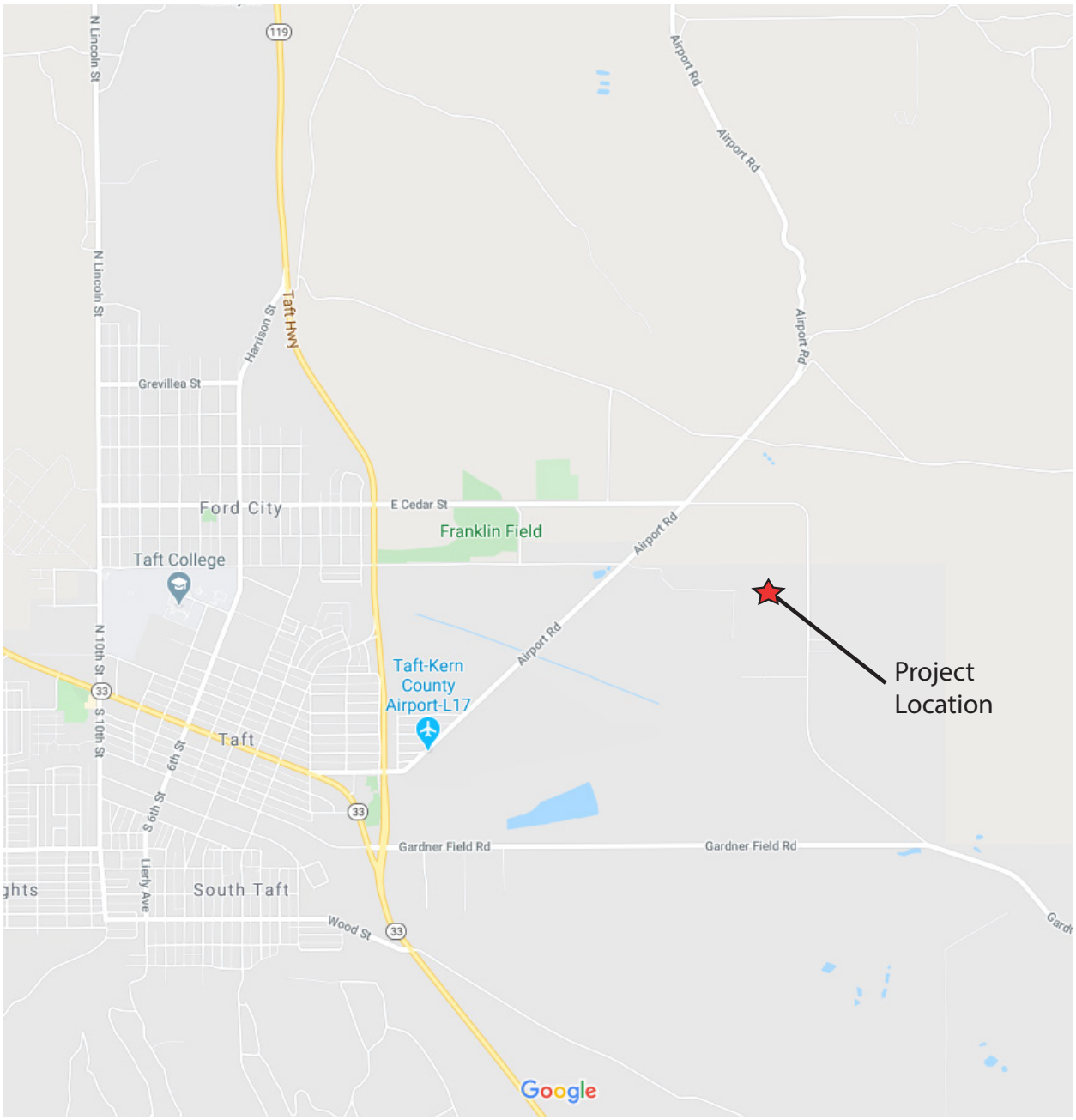
List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
KBtu	Thousand British Thermal Units
KSF	Thousand Square Feet
KWH	Kilowatt-hours
LCFS	Low Carbon Fuel Standard
LST	Localized Significance Threshold
m^3	Cubic Meter
MG	Milligrams
MGAL	Million Gallons (of water)
MPO	Metropolitan Planning Organization
MTCO2e	Metric Tons of Carbon Dioxide Equivalents
MWhrs	Megawatt-hours
NAAQS	National Ambient Air Quality Standards
NOAA	National Oceanic and Atmospheric Administration
N_2O	Nitrous Oxide
NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
O_3	Ozone
PFAs	Perfluoroalkyl Substances
PFCs	Perfluorocarbons
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
PPB	Parts Per Billion
PPM	Parts Per Million
PPT	Parts Per Trillion
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Coarse Particulate Matter
PRC	Public Resources Code
ROG	Reactive Organic Gases
ROW	Right of Way
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition System
SCS	Sustainable Communities Strategy
SF	Square Feet
SF_6	Sulfur Hexafluoride

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	**Full Phrase or Description**
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAQMD	San Joaquin Valley Air Quality Management District
SVAB	Sacramento Valley Air Basin
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SO_4^{2-}	Sulfates
SO_x	Sulfates
SRA	Source Receptor Area
TAC	Toxic Air Contaminants
TDM	Travel Demand Management
TIS	Transportation Impact Study
U.N.	United Nations
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
V.	Version
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
ZEV	Zero Emission Vehicle
µg	Micrograms
§	Section
°	Degrees

CEQA Environmental Checklist Form
Initial Study and Mitigated Negative Declaration

Project Information

1. Project Title:	Gas Company Road Solar Energy Storage Project
2. Lead Agency Name and Address:	City of Taft, Planning and Development Services 209 East Kern Street Taft, CA 93268
3. Contact:	Mark Staples Director of Planning and Development Services (661) 763-1222 ext. 124 Email: mstaples@cityoftaft.org
4. Project Location:	Airport Road between East Ash Street and East Cedar Street/Gas Company Road Total Project site: 58.25 acres Assessor's Parcel No: 220-240-26 & 220-300-14 Map: USGS Taft 7.5 Minute Quadrangle Map (1973) Section, Township & Range: Section 17, Township 32 South, Range 23 East of the Mount Diablo base and Meridian Latitude: 35° 09' 00.00" N Longitude: 119° 25' 28.73" W Elevation: 770-830 feet above mean sea level (amsl)
5. Project Sponsor Name and Address:	Apex Energy Solutions, LLC, 604 Sutter Street, Suite 250, Folsom, California, 95630
6. General Plan Designation:	Industrial and Commercial
7. Zoning:	I – Industrial and GC – General Commercial
8. Project Description:	Apex Energy Solutions, LLC is proposing to develop the Gas Company Road Solar Energy Storage Project (Project) located on 58.25 acres on Airport Road between East Ash Street and East Cedar Street/Gas Company Road in the City of Taft (City) (See Exhibit 1). The Project is located in the northeast portion of the City and would include an up to eight (8) megawatt alternating current (MWAC) crystalline solar photovoltaic (PV) energy generation facility, power conversion system (PCS), and Battery Energy Storage System (BESS). The Project site consists of two irregular-shaped parcels (APNs 220-300-14 & 220-240-26) (See Exhibit 2). Parcel Number 220-240-26, which is approximately 53.24 acres, is zoned for Industrial uses and would be developed with the MWAC solar PV energy generation system and BESS energy storage system (See Exhibits 3 & 4). In addition to the solar PV modules that would be mounted on fixed-tilt ground-mounted racking or single-axis trackers, the site would be developed with battery storage system containers, electrical inverters, associated transformers, power poles, an access road, and perimeter fencing. Parcel Number 220-300-14, which is approximately 5.01 acres, is zoned for General Commercial uses and is an accessory parcel that would be used as a staging and parking area during construction. However, no permanent structures would be developed on this parcel.



Source: Google Maps

Not to Scale

Exhibit 1 Regional Context Map

Gasoline Road Solar Energy Storage Project
Taft, California

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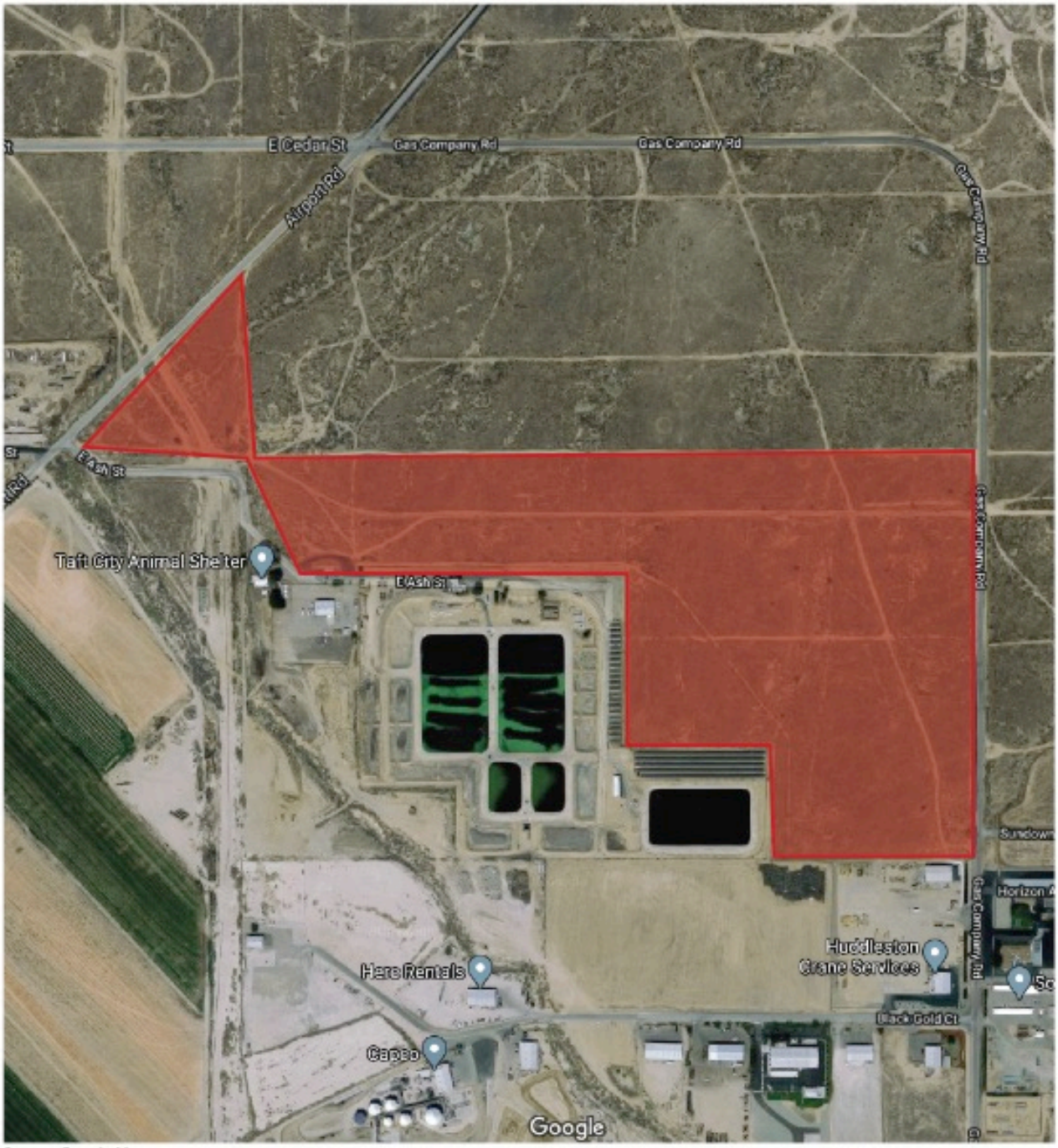

Source: Google Maps

- Project Site

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Exhibit 2 Project Vicinity Map

Gasoline Road Solar Energy Storage Project
Taft, California

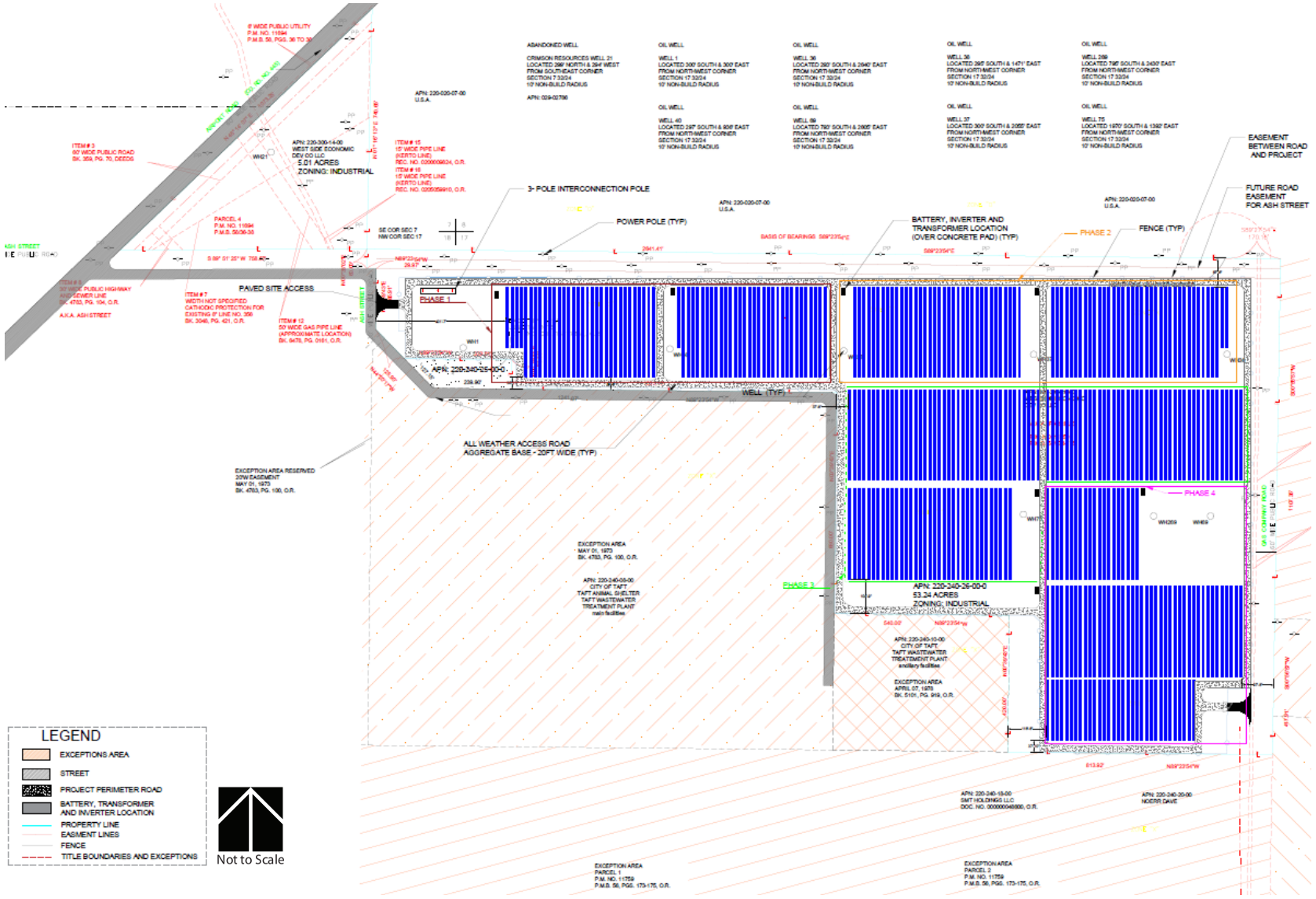

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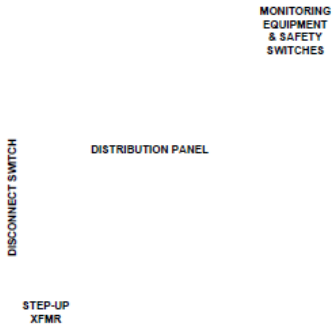
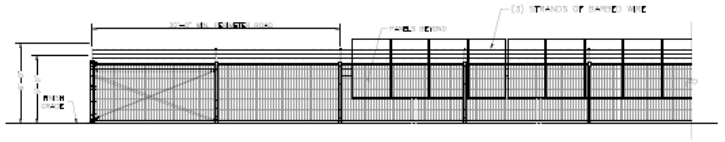
Exhibit 3 Site Plan

Gasoline Road Solar Energy Storage Project

Taft, California



1 EQUIPMENT PAD LAYOUT (TYPICAL OF 6)
N.T.S.



2 EAST OR WEST PERIMETER ELEVATION, TYP.
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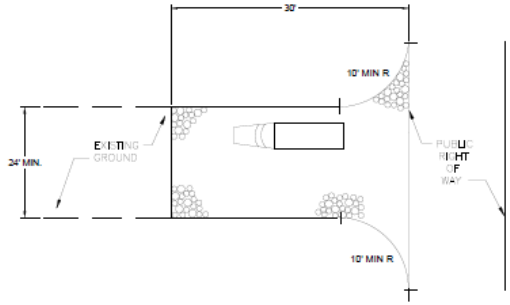
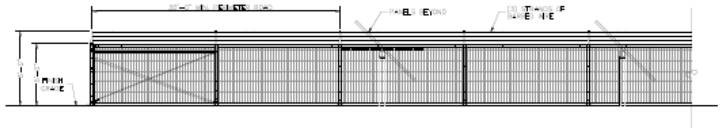
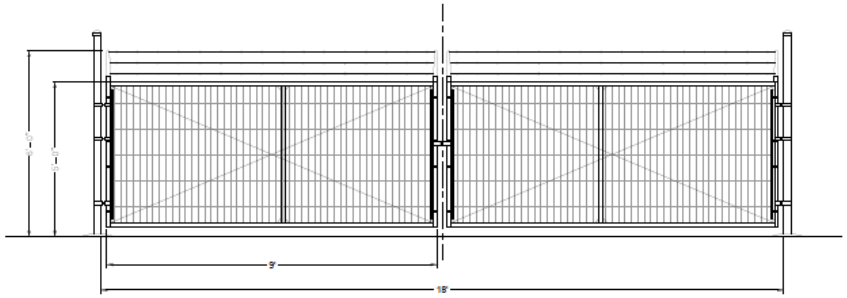


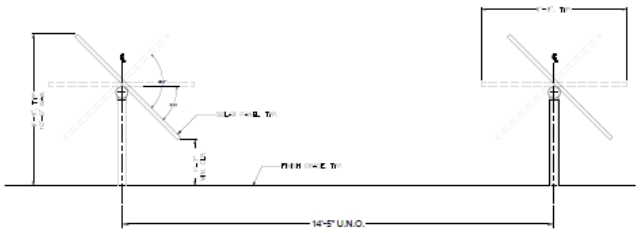
3 SITE ENTRANCE (PLAN VIEW)
N.T.S.



4 NORTH OR SOUTH PERIMETER ELEVATION, TYP.
N.T.S.



5 BI-DIRECTIONAL GATE ELEVATION
N.T.S.



6 NORTH OR SOUTH TRACKER ELEVATION, TYP.
N.T.S.

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Exhibit 4 Elevations

Gasoline Road Solar Energy Storage Project
Taft, California

As shown in Exhibit 3, the PV modules would be arranged in arrays spaced approximately 14 to 15 feet apart (pile to pile) to maximize performance and to allow access for panel cleaning and maintenance (if necessary). The groupings of arrays would be separated by 20-foot wide interior roads, with a 20-foot wide perimeter road along the edges of the project site. A six-foot high security fence would be installed around the perimeter of the Project site with two access points.

It is anticipated that the proposed project would have an electrical output of up to 8.0 MWAC, and would be sold to an electric utility purchaser or another power purchaser under a long term contract, power purchase agreement (PPA), or via the California Independent System Operator (CAISO) wholesale electricity markets.

The project would be constructed in up to four (4) phases and each phase would be built in approximately fourteen (14)-month period and is anticipated to operate for a period of up to 30 years. After the 30-year project service life, the project would be decommissioned, and the project site returned to its pre-project condition. A detailed description of the Project components is provided below, followed by a description of Project construction. The proposed project includes the following physical site improvement components:

- Installation of solar PV modules mounted on stationary fixed-tilt ground-mounted racking or single-axis trackers,
- PV panel support structures,
- Battery storage system enclosures,
- Combiner boxes, electrical inverters, and transformers,
- Overhead and buried electrical conduit, transmission, and collection lines,
- Data monitoring equipment,
- All-weather access road,
- On-site, unpaved interior roads with an all-weather perimeter road, and
- Security fencing.

Project Components

Photovoltaic (PV) Modules

The PV technology proposed for the Project would be Mono or Polycrystalline Solar Modules. The PV modules are non-reflective and would convert sunlight into DC electricity to supply the electrical grid. The PV modules would consume no fossil fuels and emit no pollutants during operation. PV panels would be mounted on metal support structures. The modules would be mounted in rows on either stationary fixed-tilt ground-mounted racking or single-axis trackers (generally used for higher efficiency generation) to connect the PV modules to the foundations.

Mounting Structures (Fixed-Tilt and Single-Axis Tracker)

Racking refers to the support structure to which the solar PV modules are affixed that allows them to be properly positioned for maximum capture of the sun's solar energy. The Project would utilize either stationary fixed-tilt ground-mounted racking or single-axis trackers for its mounting structures. The size and depth of any piles and/or support structures required for the racking would be based on the recommendations of the Geotechnical Report prepared for the Project and the accompanying structural engineering analysis. The PV module arrays' final

elevations from the ground would be determined during the detailed Project design process; however, for the purpose of the analysis, maximum height above the ground surface or base flood elevation (BFE, if applicable) would be no higher than ten (10) feet. It is common practice to maintain as low of an elevation profile as possible to reduce potential wind loads on the PV module arrays.

The fixed-tilt ground-mounted racking system would be arranged east to west and secured at a tilt ranging from 10° to 25° from horizontal, which would keep the PV modules pointed south to maximize exposure to the sun over the course of each day. The fixed-tilt ground-mounted racking would be supported by galvanized steel piles, helical screws, ballasted concrete blocks, or equivalent.

Battery Energy Storage System/Enclosures

As part of the Project, a battery energy storage system (BESS or ESS) would be constructed adjacent to the solar facility within the site footprint to provide energy storage and discharge capabilities under various operating conditions. The proposed BESS or ESS would provide a maximum capacity of 8 MW over a 4-hour period for a total energy reservoir of 32 MWhs.

The energy storage system would consist of 8 modular battery storage system structures, each situated in a container measuring approximately up to 53 feet long, 8 feet wide, and 10 feet high, with a capacity up to 424 sq. ft. per container. Each container would house arrays of lithium ion (Li-ion) batteries in an open-air style racking (similar to computer racking) 7 to 9 feet high with associated wiring and controls. Each container will also have a fire rating in conformance with Kern County Fire Department standards and have specialized fire suppression systems installed for the battery compartments. All non-battery compartments would have standard sprinkler systems compliant with Kern County Fire Department requirements. The structure would also have HVAC cooling in areas with batteries to maintain energy efficiency as required. Power to the HVAC, lighting, etc. would be provided via a connection to the on-site station service transformer with connection lines installed above and/or below ground. The energy storage system would be unstaffed and would have remote operational control and periodic inspections/maintenance performed as necessary.

Electrical Collection and Distribution System and POI

The medium-voltage power would be conveyed underground, or aboveground where necessary to cross over any sensitive site features to connect to the Project interconnection facilities. The Project interconnection facilities would then connect to the existing utility approved point of interconnection (POI) at the northwest corner of the Project site near the primary entrance. The Project interconnection facilities design would meet all necessary utility standards and requirements. All required electrical breaker systems and protective relay systems would be installed as part of the Project. Surge arrestors would be used to protect the facility and auxiliary equipment from lightning strikes or other disturbances, as required. Distribution from the site would be via an overhead connection from the site to the utility lines located on the south side of East Ash Street, or the west side of Gas Company Road.

Plant Control System and Data Monitoring Equipment

Once constructed the operation is monitored and controlled remotely and there will be no on-site offices or employees. The Project would have a Supervisory Control and Data Acquisition (SCADA) system that would allow for remote monitoring and control of inverters and other Project components. The SCADA system would be able to monitor Project output and availability, and to run diagnostics on the equipment. The Project would also have a local overall real time automated controller (RTAC) that would provide monitoring of the solar field as well as control of the balance of facility systems. The microprocessor based RTAC would provide control, monitoring, alarm, and data storage functions for plant systems as well as communication with the project's SCADA system.

Site Access

Access to the site would be limited to two entrances; a primary entrance from East Ash Street and a secondary entrance from Gas Company Road. The primary access would be a fully improved access entrance meeting City of Taft Public Works standards, and would include a paved commercial level entrance for about 80 feet from the current edge of pavement, along with paving and repairs of any damage resulting from construction activities to East Ash Street from Airport Road. The secondary access would be an emergency access point only and would have a paved apron within the right of way improved with an all-weather access surface such as Class II base material. Each access point would each be provided with a minimum of 24-foot swinging or sliding gates, and a KNOX lock or box installed to prevent unauthorized access to the Project site.

Internal to the Project site, nominal 20-foot-wide roads, consistent with Kern County Fire Department standards and compacted with Class II base material, would be provided between the PV arrays, as well as around the perimeter of the Project site inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles.

Security

Site Security. Controlled-access gates would be located at the main entrance to the site. These would either be swinging or sliding gates, with a minimum width of 24-feet, as required for access by the property owner(s) and for the convenience of the proponent in accessing and maintaining their facilities; this access point would be keyed, and a KNOX lock or box installed to prevent unauthorized access to the Project site. All easements already recorded would be honored. Additional site security measures may include a closed-circuit camera system designed to cover the entire facility. This system would be remotely monitored 24 hours a day, 7 days per week, and security breaches would be reported to emergency responders as well as site operations. An intrusion detection system may be installed along perimeter fences to alert monitors of fence breaches, and a camera working in conjunction with the fence intrusion system would decrease the number of false positives reported.

Fencing. To ensure the safety of the public, a six-foot-high security fence would be installed around the perimeter of the Project site at the commencement of construction and site access would be limited to authorized site workers. The security fencing would be wildlife permeable and per the recommendations made

in Cypher et. al. 2009, "Permeable Fence and Wall Designs that Facilitate Passage by Endangered San Joaquin Kit Foxes", the perimeter security fence shall leave a five-inch opening between the fence mesh and the ground or the fence shall be raised five inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence. Any trash, vegetation, and/or other debris accumulated along the fence line shall be cleared once a week during construction and at least twice (2x) per year during operations, in conjunction with other maintenance activities.

Signage. Signs warning of high voltage danger and citing 18 USC 1366 would be posted along the perimeter fence at regular intervals and at all ingress and egress points. These signs would also include a no trespassing statement. Signage would identify the Project operator and owner and provide emergency contact information. All signage would conform to local ordinance signage requirements.

Landscaping

No landscaping is proposed as part of the Project.

Project Construction

Project Phasing

The project would be constructed in up to four (4) phases and each phase would be built over an up-to fourteen (14)-month period. Each construction phase would consist of up to 2MW AC of solar modules and two battery energy storage containers (or 2MW BESS equivalent) with all associated appurtenances. Each phase could be constructed individually on a serial basis, or multiple phases could be constructed concurrently as appropriate to accommodate market demand and Project economics.

The construction equipment, materials, and labor involved in building the Project remain similar whether the Project is constructed in single or concurrent phases over time versus over a single full buildout. The buildout of the entire Project at once results in greater intensity of labor and equipment during the construction period. The actual start of construction for each phase will be determined based on the receipt of all pre-construction permits and approvals and securing financing for each phase of the Project. The general construction process and steps are summarized in Table 1 below, followed by a more detailed discussion.

Table 1
General Project Construction Activities

Phase	Duration	Activities
Site Preparation	8 Months	• Implement pre-construction mitigation measures and surveys • Development of construction staging and parking areas for equipment and personnel • Implement a project perimeter fence • Site preparation including installation of stormwater management features, grading, and compaction as required

Mechanical and Electrical Installation	4½ Months	• Installation of posts for the PV racks and equipment pads • Installation of PV racks, trenching for wiring • Installation of gen-tie and collection system structures and wiring • Installation of battery storage containers • Completion of connections
Commissioning	½ Month	• Commissioning and testing
Closeout/ Operations	1 Month	• Site cleanup and demobilization
Note: Some activities would occur concurrently.		

Construction Activities

Construction activities would primarily involve grubbing and trash removal; fine grading i.e. general leveling of the Project site to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; and the installation of solar equipment and security fencing.

The construction work force is expected to consist of 30 to 50 workers at any one time. Construction work would be limited to daylight hours, Monday through Friday unless otherwise necessary due to scheduling or deliveries. If construction does occur during the summer months, then starting time may be during early morning nighttime hours for the safety of employees.

There will be temporary construction offices during the construction phase, but these will be removed upon completion of the Project. A temporary, portable construction supply container would also be located at the site at the beginning of construction and removed at the end of construction. Onsite parking would be provided for all construction workers.

All equipment such as PV modules, mounting structures, and BESS systems are manufactured off-site and delivered to the Project site for installation.

Dust generated during construction would be controlled by watering and, as necessary, the use of other dust suppression methods and materials accepted by the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the California Air Resources Board (CARB). Dust generating activities are expected to be completed over a four to six-month duration.

Traffic

Construction worker traffic is expected to travel to the site from Taft Highway (SR-119) east along East Ash Street through the City of Taft or south along Airport Road. Delivery trucks are expected to follow the same routes as the construction workers. An estimated two (semi type) trucks would arrive at the project site each day during the first few weeks of construction of the solar generating facility.

Site Drainage and Stormwater

Areas of the solar energy storage facility where small amounts of contaminants could be released, such as the paved areas surrounding the containers, would be

constructed in compliance with storm water quality management measures (i.e., basins and infiltration areas, where required) designed to meet State and local storm water management plan requirements. These paved areas would be maintained, and any vehicle leaks or spills would be periodically cleaned with absorbent materials to minimize the potential for contamination. All applicable local Regional Water Quality Control Board discharge requirements and City of Taft's water quality regulations would be adhered to in the development and maintenance of the Project site.

Water Use

Water for construction (primarily dust control) would be purchased from local suppliers and brought to the site if water is not available onsite through West Kern Water District or is available but unusable due to an inadequate connection size. It is estimated that up to 15-acre feet of water would be needed for site grading and dust control over the expected Project construction period.

Water for washing the PV modules would be purchased from local available sources and delivered to the Project site by water trucks. The volume of water if needed, to be used for PV module washing, if needed, is estimated at up to one (1) acre feet per year.

Waste

Small amounts of trash would be generated during construction from packaging materials delivered to the site. Construction related waste would be transported to a local landfill for disposal via local services with Westside Waste Management. Portable toilets would be located on site during construction and sanitary waste would be removed from the site by a local licensed/approved contractor.

No significant general waste is expected to be generated during normal operations. Sanitary waste generated during Project maintenance operations would be handled by bringing portable toilets to the Project site, with the waste removed by the contractors working at the site after all work is complete. Periodically the site will be checked and cleaned as necessary and any waste found will be removed by a local contractor.

No hazardous waste is expected to be generated from the Project during either construction or normal Project operations.

Lighting

Project lighting would be installed for security reasons and on-going maintenance. Project lighting, triggered by motion sensors, would be installed at ingress and egress gates and at strategic locations around the facility for security reasons and ongoing maintenance. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships. Project lighting would conform to National Electric Safety Code (NESC) requirements and all applicable outdoor lighting codes per the local ordinance.

Decommissioning and Reclamation

At the end of the Project's operational term, the Project proponent may determine that the Project should be decommissioned and deconstructed, or it may seek an

extension of the CUP. Because the solar energy storage system's supporting equipment would sit on the surface of the land, when they are removed after the Project's lifetime the land would be largely unaltered from its natural state. The Project proponent would work with City of Taft to put an agreement in place that would ensure decommissioning of the Project after its productive lifetime. The Project would use Best Management Practices (BMPs) to ensure the collection and recycling of PV modules and batteries and minimize the potential for such materials to be disposed of as municipal waste. Decommissioning and reclamation may include: 1) packaging PV modules and batteries for removal and recycling or otherwise ensuring removal; 2) removing ancillary facilities; and 3) reclamation, re-vegetation, restoration, and soil stabilization to return the site to its native conditions. The PV modules are expected to still have useful life and would still be capable of producing electricity; these would be marketed for resale. Material and equipment such as the racking structures and mechanical assemblies will be recycled. The inverters and transformer(s) will also be reused or recycled. The equipment pads made of concrete will be crushed and recycled. Any underground conduit and wire will be removed by uncovering the trenches and backfilling when done. The remaining balance of material and/or waste generated from the Project would either be recycled as appropriate for the type of material or disposed of at the local transfer station and/or landfill facility.

9. Surrounding Land Uses & Environmental Setting:

The 53.240-acre parcel is located on the west side of Gas Company Road, approximately 650 east of the intersection of East Ash Street and Airport Road, and is zoned for Industrial uses. The 5.010-acre parcel is located adjacent to the main parcel just to the northwest, and is zoned for General Commercial uses. The majority of the Project site is generally flat (<5° slope) with an elevation that ranges from 830 feet above mean sea level in the north to 770 feet above mean seal level in the south. There is a drainage feature located at the very southeast corner of the Project site that could potentially be a jurisdictional feature (See Appendix B, Biological Technical Report and Section IV of this report for analysis). The Project site is bounded by undeveloped land to the north, east and west, Gas Company Rd to the east, industrial uses to the south, and undeveloped and agricultural land to the west. Surrounding land uses include undeveloped land, a wastewater treatment facility, agriculture, and a crane company (See Table 2, Surrounding Land Uses).

Table 2
Adjacent Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Industrial/ Commercial	I – Industrial GC – General Commercial	Undeveloped
North	1.1 State or Federal Land (Kern County)	A-1 Agricultural District (Kern County)	Undeveloped
South	Public Facilities/ Industrial	I - Industrial CF – Public Facilities	Wastewater Treatment/ Industrial Uses
East	Public Facilities/ Industrial	I - Industrial CF – Public Facilities	Undeveloped
West	Public Facilities/ Industrial	I - Industrial CF – Public Facilities	Wastewater Treatment/ Agriculture

10. Approvals needed

- Conditional Use Permit, City of Taft
- Grading Permit, City of Taft
- Building Permits, City of Taft
- Dust Control Plan, San Joaquin Valley Air Pollution Control District
- Encroachment Permit, City of Taft
- General Construction Storm Water Permit Notice of Intent, California State Water Resources Control Board
- Storm Water Pollution Prevention Plan, California State Water Resources Control Board

Environmental Factors Potentially Affected

The environmental factors checked below (x) 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	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology/Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use/Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology/Soils	☐ Population and Housing	☐ Mandatory Findings of Significance

The environmental factors checked below (x) would be potentially affected by this project, involving at least one impact that is a "**Less than Significant with Mitigation Incorporated**" as indicated by the checklist on the following pages.

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

The environmental factors checked below (x) would be potentially affected by this project, involving at least one impact that is a "**Less than Significant**" as indicated by the checklist on the following pages.

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

The environmental factors checked below (x) would have "**No Impact**" by this project as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☒ Public Services
☒ Agriculture Resources	☐ Hazards & Hazardous Materials	☒ Recreation
☐ Air Quality	☐ Hydrology/Water Quality	☐ Transportation
☐ Biological Resources	☒ Land Use/Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☒ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☐ Noise	☒ Wildfire
☐ Geology/Soils	☒ Population and Housing	☐ 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 by 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 all 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 6/17/2020

MARK STAPLES

Printed Name

Evaluation of Environmental Impacts

I. Aesthetics

Except as provided in Public Resources code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view from a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

a) **No Impact.** Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. According to the Taft General Plan and General Plan EIR, the Project site is located in the City's "Expansion Area".[1] [2] The Expansion Area includes the "Honolulu Hills", which lie between the City of Taft and Bakersfield. Agricultural lands are considered an important visual aspect of the Taft landscape according to the General Plan. Agricultural landscapes can be considered a scenic resource as many people consider the open space, row crops, fruit and nut orchards, etc. associated with agriculture to be aesthetically pleasing.

There are no roadways in the City designated as a state scenic highway.[3] The Project site is located adjacent to existing agriculture to the southwest, water treatment and industrial uses to the south, and undeveloped land to the north and east. The agricultural uses to the southwest are made up of alfalfa fields that receive water from the wastewater treatment plant; therefore, would not be considered a scenic resource per the General Plan. The Project site is not within a scenic vista. However, long distance views of hillside areas to the north and east can be seen from areas around the Project site. The Project would install solar equipment on the site; however, this would be nominally visible from parallel roadways due to the low height of equipment. As previously mentioned, the proposed solar equipment would be adjacent to an existing City of Taft Water Treatment Facility. The proposed solar equipment would not encroach on views of existing agricultural uses to the southwest, and would not block or hinder long-distance views of the hillsides to the north and east from a public right-of-way. Therefore, the proposed Project would not result in an adverse effect on a scenic vista.

b) **No impact.** As mentioned above, the Project site is not adjacent to an officially designated State scenic highway. The Project site is located in an area with agricultural uses, industrial and public utility uses, and undeveloped land.

The site contains no scenic resources such as rock outcroppings, significant trees, or historical buildings. No impact would occur.

c) **Less than significant impact.** The Project site is located in a non-urbanized area with agricultural uses, industrial and public utility uses, and undeveloped land. The Project site is zoned for industrial and commercial uses; therefore, the proposed Project would not conflict with applicable zoning. The existing visual character surrounding the Project site is characterized predominantly by undeveloped land with agricultural uses to the west and industrial uses and a water treatment facility to the south. While various components of the proposed Project may be visible from the public right-of-way along Airport Road and Gas Company Road, the visible structures of the Project would be consistent with the land use in the area and would be designed in such a way as to have a low-profile. Impacts would be less than significant.

d) **Less than significant impact.** Excessive or inappropriately directed lighting can adversely impact nighttime views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists).

The proposed Project would include security lights around the perimeter of the site and domestic light fixtures at equipment pads, as required by relevant electrical codes. No other lighting is planned. Cutoffs would be employed to prevent spillover beyond the solar field. With the application of these typical construction methods, impacts related to lighting would be less than significant.

The reflection of sunlight would be the primary potential producer of glare off the glass surfaces of the solar panels in the proposed Project. A solar panel comprises numerous solar cells. A solar cell differs from a typical reflective surface in that it has a microscopically irregular surface designed to trap the rays of sunlight for the purposes of energy production. The intent of solar technology is to increase efficiency by absorbing as much light as possible (which further reduces reflection and glare). Therefore, the project would result in less-than-significant impacts related to glare because it would use non-reflective surfaces and would use PV solar cells, which absorb rather than reflect sunlight.

II. Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined in Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

a) **No Impact.** According to the Department of Conservation Important Farmland Finder, the Project site is classified as Vacant or Disturbed Land in the western portion of the site and Grazing Land in the eastern portion of the site.[4] Vacant or Disturbed Land is defined as "open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, and rural freeway interchanges." Grazing Land is defined as "land on which the existing vegetation is suited to the grazing of livestock." This category is used only in California and was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. There are approximately 171.6 acres of Prime Farmland located to the southwest of the Project site, as designated by the State. Prime Farmland is defined by the State as "irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date." However, the City does not consider the agricultural land to the southwest to be Prime Farmland because it is comprised of alfalfa fields that accept processed water from the wastewater treatment facility to the south of the Project site.

The Project site is designated in the General Plan and zoned for Industrial and Commercial uses. The Project will not encroach upon or impact State Prime Farmland located to the southwest of the site. The Project site is currently vacant and is not currently used for cattle grazing. The proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, no impacts would occur.

b) **No Impact.** No Williamson Act Contracts are active for the proposed Project site.[5] The proposed Project would not conflict with existing Williamson Act Contracts.

c) **No Impact.** Public Resources Code Section 12220(g) identifies forest land as "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 Project site and surrounding properties are not currently being managed or used for forest land as identified in Public Resources Code Section 12220(g). The Project site is vacant, disturbed and devoid of trees. Additionally, the Project site is not zoned for timberland use; therefore, no impact to timberland zoning would occur.

d) **No Impact.** The proposed Project site is vacant, disturbed land devoid of trees; thus, there would be no loss of forest land or conversion of forest land to non-forest use as a result of this Project. No impacts in reference to loss of forestland would occur.

e) **No Impact.** The proposed Project is located in an area dominated by industrial uses, agriculture and undeveloped land. Per the discussion in section (a), (c), and (d), the proposed Project would not change the existing environment in a manner that would result in the conversion of agricultural land to non-agricultural land or forest land to non-forest land. No impacts would occur.

III. Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

An *Air Quality and Greenhouse Gas Assessment* was prepared for the proposed Project by ECORP Consulting Inc. Environmental Consultants, which is dated October 2019, and is included as Appendix A. The information in this section of the Initial Study related to plan conflicts, cumulatively considerable net increases of criteria pollutants, exposure of sensitive receptors to substantial pollutant concentrations, and odors is based on the analysis provided in the *Air Quality and Greenhouse Gas Assessment*. Air quality impacts were assessed in accordance with methodologies recommended by California Air Resources Board (CARB) and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Kern County. Operational air pollutant emissions were based on the Project site plans.

a) **No Impact.** As part of its enforcement responsibilities, the United States Environmental Protection Agency (USEPA) requires each State with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the California Clean Air Act (CAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and State ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard, 2016 Moderate Area Plan for the 2012 PM2.5 Standard, and 2007 PM10 Maintenance Plan and Request for Redesignation. These plans collectively address the air basin's nonattainment status with the national and State Ozone (O3) standards as well as PM by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving State (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region.

SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.

The proposed Project is not proposing any new residential development; therefore, there will be no increase in population as a result of the Project. The Project would not exceed the population or job growth projections used by the SJVAPCD to develop its air quality attainment plans. Furthermore, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact to statewide air quality. The energy produced by the Project would displace the criteria pollutant emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal).

Table 3 shows the emissions that would be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric). Displacement of fossil fuel emissions has a direct beneficial effect on human health for those receptors downwind of the location of the fossil fuel power plants.

Table 3
Proposed Project Displaced Criteria Pollutant Emissions (Tons)

	Emissions (Tons)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Emissions Displaced Annually (tons)						
Displaced Natural Gas-Source Emissions	0.0	0.14	0.04	0.10	0.13	0.05
Displaced Coal-Source Emissions	0.0	1.35	0.06	0.06	0.01	0.01
Total	**0.0**	**1.49**	**0.10**	**0.16**	**0.14**	**0.06**
Emissions Displaced over 30 Years (tons)						
Displaced Natural Gas-Source Emissions	0.0	4.20	1.20	3.00	3.90	1.50
Displaced Coal-Source Emissions	0.0	40.50	1.80	1.80	0.30	0.30
Total	**0.0**	**44.70**	**3.00**	**5.40**	**4.20**	**1.80**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

Notes: In order to provide a conservative analysis, the Proposed Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually). A heat rate of 10,000 British Thermal Units (Btu) per kilowatt hour (kWH) is assumed. The heat content of coal is assumed at 24 million Btu per ton of coal burned. Eight MW (17,520,000 annual kWH) x 10,000 heat rate = 233,698,107,347 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (90.95 percent). Coal constitutes 8.61 percent of all fossil fuel-based energy. Therefore, 56,961 million of the displaced Btu is displaced natural gas consumption and 5,386 million of the displaced Btu is displaced coal. At a rate of 24 million Btu per ton of coal burned, the Project would displace 224.4 tons of burned coal annually.

As shown in Table 3, the Project would potentially displace just under 45 tons of NOx, three tons of CO, just over five tons of SO2, just over four tons of PM10, and almost two tons of PM2.5 over the course of 30 years. Furthermore, as demonstrated in Table 5 and Table 6 below, the Project would not exceed the applicable SJVAPCD

significance thresholds for construction or operational-source emissions. Therefore, the Project would be consistent with the emission-reduction goals of the SJVAPCD Attainment Plans.

b) **Less Than Significant Impact.** A project may have a significant impact if project-related emissions exceed federal, state, or regional standards or thresholds, or if project-related emissions substantially contribute to existing or project air quality violations. The proposed Project is located within the Kern County Portion of the San Joaquin Valley Air Basin, where efforts to attain state and federal air quality standards are governed by the SJVAPCD. Both the state of California (state) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as 'criteria pollutants'). These pollutants include ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), inhalable particulate matter with a diameter of 10 microns or less (PM10), fine particulate matter with a diameter of 2.5 microns or less (PM2.5), and lead (Pb). The state has also established AAQS for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, California AAQS are more stringent than the national AAQS.

Air pollution levels are measured at monitoring stations located throughout the air basin. Areas that are in nonattainment with respect to federal or state AAQS are required to prepare plans and implement measures that will bring the region into attainment. Table 4 (Attainment Status of Criteria Pollutants in the Kern County Portion of San Joaquin Valley Air Basin) summarizes the attainment status in the Project site for the criteria pollutants. Discussion of potential impacts related to short-term construction impacts and long-term area source and operational impacts are presented below.

Table 4
Attainment Status of Criteria Pollutants in the Kern County Portion of San Joaquin Valley Air Basin

Pollutant	Federal	State
O_3 (1-hr)	Nonattainment	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM^{10}	Nonattainment	Attainment
$PM^{2.5}$	Nonattainment	Nonattainment
CO	Unclassified/Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment
Pb	Unclassified/Attainment	Attainment
Source: CalEPA Air Resources Board. State and National Area Designation Maps. 2018.		

The proposed Project would result in construction-related and operational emissions of criteria pollutants and toxic air contaminants. A project may have a significant impact if project-related emissions exceed federal, state, or regional standards or thresholds, or if project-related emissions will substantially contribute to existing or projected air quality violations.

Construction Emissions

Construction-generated emissions are temporary and short term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NOX, PM10, and PM2.5. The largest amount of ROG, CO, and NOX emissions would occur during the earthwork phase. PM10 and PM2.5 emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced

onsite as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction- generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

During construction activities, the Project would also be required to comply with SJVAPCD Regulation VIII (Fugitive PM10 Prohibitions). The purpose of this rule is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources. For instance, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. Regulation VIII specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.
- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 mph.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Do not overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

The SJVAPCD's (2015) *Guidance for Assessing and Mitigating Air Quality Impacts* identifies significance thresholds for ROG, CO, and NOX, SO2, PM10, and PM2.5. Construction-generated ozone precursor emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum annual construction-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 5 (Unmitigated Construction-Related Emissions). Based on the results of the model, maximum daily emissions from the construction of the proposed Project would not exceed established SJVAPCD thresholds.

Table 5
Unmitigated Construction Related Emissions (lbs/day)

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Annual (Maximum Tons per Year)						
Construction in 2020	0.43	4.70	3.00	0.00	1.10	0.60
Construction in 2021	0.32	3.60	2.58	0.00	0.29	0.16
SJVAPCD Potentially Significant Impact Threshold	*10*	*10*	*100*	*27*	*15*	*15*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SJVAPCD Regulation VIII. The specific regulation applied in CalEEMod was reducing vehicle speeds on unpaved roads to under 15 mph. Emissions account for 2,000 square foot energy storage system enclosures and the grading of 60 acres.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the SJVAPCD's emission reduction commitments in the PM10 and Ozone Attainment Plans. This rule applies to the following construction projects within the jurisdiction of the SJVAPCD:

- 50 residential units,
- 2,000 square feet of commercial space,
- 25,000 square feet of light industrial space,
- 100,000 square feet of heavy industrial space,
- 20,000 square feet of medical office space,
- 39,000 square feet of general office space,
- 9,000 square feet of educational space,
- 10,000 square feet of government space,
- 20,000 square feet of recreational space, or
- 9,000 square feet of space not identified above.

This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NOx or two tons of PM10. Since the Project does not include the construction of a permanent building and is not a transportation project, the proposed Project would not be required to comply with this rule. Additionally, the Project is proposing an eight MW solar energy generation facility. The benefit of solar energy is that the production of electricity from these sources involves almost no direct emissions of criteria air pollutant emissions. In contrast, fossil fuel–fired electric generation from coal, oil, or natural gas results in substantial direct emissions that contribute to adverse impacts on the environment. For instance, electric generation from fossil fuel–fired power plants contributes 22 percent of all NOx emissions in the U.S. according to the U.S. Department of Energy (DOE 2008). Renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact statewide. Construction-related impacts will be less than significant.

Operational Emissions

Long-term emissions are evaluated at build-out of a project. Long-term criteria air pollutant emissions would result from the operation of the solar energy storage facility. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions would result from

automobile and other vehicle sources associated with intermittent maintenance trips to and from the proposed facility. Energy demand emissions result from use of electricity. Mobile source emissions refer to on-road motor vehicle emissions generated from the Project's traffic. However, mobile source emissions from the proposed Project are expected to be minimal, as operation of the facility would not include daily employee trips or customer and vendor trips and would only require sporadic maintenance trips to the facility. Area source emissions from the proposed Project include landscape maintenance and an average square footage to be repainted each year.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable. Although limited, implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM10, PM2.5, CO, and SO2 as well as O3 precursors such as ROG and NOX. Project-generated increases in emissions would be predominantly associated with motor vehicle use for routine maintenance work. The SJVAPCD's (2015) *Guidance for Assessing and Mitigating Air Quality Impacts* identifies significance thresholds for ROG, CO, and NOX, SO2, PM10, and PM2.5. Operational-generated O3 precursor emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum annual operational-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 6 (Operational-Related Emissions), below. As indicated in Table 6, operational-generated emissions would not exceed SJVAPCD significance thresholds.

Table 6
Operational-Related Emissions

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Annual (Maximum Tons per Year)						
Area Source	0.22	0.00	0.00	0.00	0.00	0.00
Energy Use	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SJVAPCD Significance Threshold	*10*	*10*	*15*	*15*	*100*	*27*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emissions projections account for one employee vehicle trip per day and the operation of a 2,000-square-foot energy storage system enclosures.

As previously mentioned, SJVAPCD Rule 9510 is intended to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans. Since the Project is not a typical development project involving permanent buildings or other stationary sources of emissions and is not a transportation project, the proposed Project would not be required to comply with this rule. Furthermore, as shown in Table 6, the Project would emit a very low level of operational pollutants. Although the Project does not need to comply with Rule 9510, it is important to note that one of the benefits of solar energy is that the production of electricity from these sources involves minimal worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. Renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact statewide. Therefore, NOX and PM10 emissions would be

minimal during operations. Long-term emissions would not exceed the daily thresholds established by SCAQMD; impacts would be less than significant.

Cumulative Emissions

Cumulative short-term, construction-related emissions and long-term, operational emissions from the Project would not contribute considerably to any potential cumulative air quality impact because short-term Project and long-term operational emissions would not exceed any SJVAPCD daily threshold. As required of the proposed Project, other concurrent construction projects and operations in the region would be required to implement standard air quality regulations and mitigation pursuant to state CEQA requirements, thus ensuring that air quality standards are not cumulatively exceeded. Cumulative impacts are considered less than significant.

c) **Less than Significant Impact.** Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. There are no sensitive receptors immediately adjacent to the Project site. The nearest sensitive receptor is a residence located approximately 0.40 mile to the northwest of the Project site.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading), soil hauling truck traffic, paving, and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminants (TAC) of concern. Particulate exhaust emissions from diesel- fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non- cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted, the maximum construction-related emissions of exhaust PM2.5, considered a surrogate for DPM, would be 2.02 pounds per day during construction activity in 2020 and 0.93 pound per day during construction activity in 2021 (PM2.5 is considered a surrogate for DPM because more than 90 percent of DPM is less than one microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter [i.e., PM2.5], according to CARB. Most PM2.5 derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., site preparation, grading, paving) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. 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 70-, 30-, or nine-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed Project. Consequently, an important consideration is the fact that construction of the proposed Project is anticipated to last approximately 17 months. Therefore, considering the relatively low mass of DPM emissions that

would be generated during even the most intense season of construction, the relatively short duration of construction activities required to develop the site, the highly dispersive properties of DPM, and the lack of nearby sensitive receptors, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics. Impacts would be less than significant.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally occurring asbestos-containing soils. The proposed Project is not located within an area designated by the State of California as likely to contain naturally occurring asbestos. As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos. No impact would occur.

Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The CI fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever is found in California, including Kern County. In about 50 to 75 percent of people, Valley Fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

The California Department of Public Health (CDPH) considers Kern County a highly endemic area for Valley Fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get Valley Fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for Valley Fever occurs during the driest months in California, between June and November. Infection from Valley Fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. With minimal site grading and conformance with SJAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers.

Operational Air Contaminants

The proposed Project involves the construction of a solar energy generation facility. The proposed Project will not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable air toxic emissions from Project operations.

CO Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service (LOS) during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations across the state have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the SCAQMD *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards. The Project would require minimal maintenance and would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values. CO Hot Spot impacts would not occur as a result of the proposed Project.

d) **Less than Significant Impact.** Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to

describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Construction

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, under CEQA, construction odors would result in a less than significant impact related to odor emissions.

Operations

CARB's *Air Quality and Land Use Handbook* (2005) identifies the sources of the most common operational odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The Project does not contain any of the land uses identified as typically associated with emissions of objectionable odors. As such, a less-than-significant impact would occur.

IV. Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?		X		
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 Service?			X	
c) Have a substantial adverse effect on state or 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?			X	
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

A *Biological Technical Report* for the Project site was conducted by ECORP Consulting Inc. Environmental Consultants, which is dated November 2019, and is included as Appendix B. In October 2019, ECORP conducted a biological reconnaissance survey of the Project site. The information in this section of the Initial Study related to biological resources is based on the analysis provided in the *Biological Technical Report*.

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Database (CNDDB) and the California Native Plant Society's (CNPS') Electronic Inventory (CNPSEI) to determine the special-status plant and wildlife species that have been documented near the Project site. Additional information was gathered from the following sources and includes, but is not limited to:

- Natural Resources Conservation Service (NRCS) *Web Soil Survey*;
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW);
- *Special Animals List* (CDFW);
- *The Jepson Manual*;
- *The Manual of California Vegetation*, 2nd Edition; and
- various online websites (e.g., Calflora).

Using this information and observations in the field, a list of special-status plant and animal species that have potential to occur on or near the Project site was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Special-status species reported for the region in the literature review or for which suitable habitat occurs within the Project site were assessed for their potential to occur within the Project site based on the following guidelines:

Present:	The species was observed within the Project site during a site visit or focused survey.
High:	Habitat (including soils and elevation factors) for the species occurs within the Project site and a known occurrence has recently been recorded (within the last 20 years) within five miles of the Project site.
Moderate:	Habitat (including soils and elevation factors) for the species occurs within the Project site and a documented observation occurs within the database search, but not within five miles of the area; suitable habitat present and a historic (more than 20 years old) documented observation was recorded within five miles of the Project site; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs on the Project site.
Low:	Limited or marginal habitat for the species occurs within the Project site and a recently documented observation occurs within the database search, but not within five miles of the Area; limited or marginal habitat present and a historic (more than 20 years old) documented observation was recorded within five miles of the Project site; or suitable habitat strongly associated with the species occurs on the Project site, but no records or only historic records were found within the database search.
Presumed Absent:	Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Project site.

Note that location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that species.

a) **Less than Significant with Mitigation Incorporated.**

Plant Species

The Project site, consisting of Mediterranean grass grassland and allscale scrub, contained some areas of historical disturbance but was largely undisturbed and/or recovering from historical disturbances. The literature review and database searches identified 18 special-status plant species that could occur in the vicinity of the Project site, and although no special-status plant species were observed during the biological survey, the Project site contained suitable habitat for sixteen special-status plant species with varying levels of potential to occur. Two plant species, heartscale and Kern mallow, were determined to have a high potential to occur on the Project site based on the presence of suitable habitat and recently documented records of the species within five miles of the Project site. Kern mallow is a federal listed (endangered) species and impacts to Kern mallow would be considered significant under CEQA. Direct impacts to Kern mallow, heartscale, and other special-status plant species could occur from removal during grading and construction. Without additional surveys and grading monitoring, potential impacts to these species could be significant. However, implementation of Mitigation Measures **BIO-1** and **BIO-2** will reduce impacts to a level that is less than significant.

Wildlife Species

The literature review and database searches identified 31 special-status wildlife species that could occur in the vicinity of the Project site, and although no special-status wildlife species were observed during the biological survey, the Project site contained suitable habitat for sixteen special-status wildlife species with varying levels of potential to occur. Ten species were found to have a high potential to occur, three were found to have a moderate potential to occur, two were found to have a low potential to occur based on the presence of suitable habitat on the Project site and recently documented observations of the species near the Project site. Sixteen special-status wildlife species were presumed absent from the Project site due to lack of suitable habitat. Therefore, mitigation measures including focused surveys, preconstruction surveys, and construction monitoring will be required to ensure that Project related impacts to the ten special-status wildlife species that were found to have high potential to occur would be less than significant. These measures are discussed in detail below.

San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse were all determined to have a high potential to occur within the Project site due to the presence of suitable habitat and recent (< 20 years old) records of the species within five miles of the Project site. Although these species were not observed during the reconnaissance survey, they may still be present on the site or may move onto the site prior to construction. Direct impacts to these special-status small mammal species could occur by mortality and habitat loss during Project construction from ground disturbance, and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. Impacts to these species could be considered significant under CEQA. However, implementation of Mitigation Measures **BIO-2**, **BIO-3**, and **BIO-4** will reduce impacts to a level that is less than significant.

Burrowing owl were determined to have a high potential to occur within the Project site due to the presence of suitable burrowing and foraging habitat and recently recorded observations within five miles of the Project site. Although burrowing owls were not observed during the reconnaissance survey, the species is mobile and could take up residence at any time. Burrowing owls are a CDFW SSC but are also protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code and impacts to this species could be considered significant under CEQA. Direct impacts to burrowing owl could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. However, implementation of Mitigation Measures **BIO-2**, **BIO-5**, and **BIO-9** will reduce impacts to a level that is less than significant.

Blunt-nosed leopard lizard was determined to have a high potential to occur within the Project site due to the presence of suitable habitat and recently documented observations within five miles of the Project site. Although these species were not observed during the reconnaissance survey, they may still be present on the site or may move onto the site prior to construction. Blunt-nosed leopard lizard is a federal and state-listed (endangered) and CDFW fully protected species and impacts to this species would be considered significant under CEQA. Direct impacts to blunt- nosed leopard lizard could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. However, implementation of Mitigation Measures **BIO-2**, **BIO-4**, and **BIO-6** will reduce impacts to a level that is less than significant.

San Joaquin kit fox was determined to have a high potential to occur within the Project site due to the presence of suitable habitat and documented observations within five miles of the Project site. San Joaquin kit fox is a federal-listed (endangered) and state-listed (threatened) species and impacts to this species could be considered significant under CEQA. Although the San Joaquin kit fox or their dens were not observed during the biological reconnaissance survey, the species is mobile and could take up residence at any time. Direct impacts to the San Joaquin kit fox could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. However, implementation of Mitigation Measures **BIO-2**, **BIO-7**, and **BIO-8** will reduce impacts to a level that is less than significant.

Special status bird species, including Swainson's hawk, Le Conte's thrasher, and Loggerhead shrike, as well as other migratory bird species protected under the MBTA and California Fish and Game Code, could occur within the Project site due to the presence of suitable nesting and/or foraging habitat within the Project site. Although these species were not observed during the reconnaissance survey, they may still be present on the site or may move onto the site prior to construction. If construction of the Project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could indirectly affect birds protected by the MBTA and their nests due to increased human/vehicular activity, noise, ground vibration, and increased dust. However, implementation of Mitigation Measures **BIO-2** and **BIO-9** will reduce impacts to a level that is less than significant.

The Crotch bumble bee, a candidate for state listing as endangered, is not expected to occur on the Project site because no observations have been recorded within five miles of the Project site and the Project site provides low quality habitat for this species. If, however, the Crotch bumble bee is detected on the Project site, then project impacts could occur in the form of mortality and loss of habitat and these impacts would be considered significant. Implementation of Mitigation Measures **BIO-2** and **BIO-10** will reduce impacts to a level that is less than significant.

San Joaquin coachwhip was determined to have a high potential to occur and California glossy snake and American badger were determined to have a moderate potential to occur on the Project site due to the presence of suitable habitat and species records in the vicinity of the Project site. Although these species were not observed during the reconnaissance survey, they may still be present on the site or may move onto the site prior to construction. However, due to the relatively small size of the Project site, if these species are present within the Project site, they are likely to only occur in low density and loss of those animals would not be enough to result in a significant impact. Therefore, no focused surveys or mitigation measures are recommended and impacts to these species are considered less than significant.

Mitigation Measures

BIO-1 **Special-Status Plant Survey:** A special-status plant survey shall be conducted within suitable habitat on the Project site for species determined to have a high or moderate potential to occur on the Project site. The survey shall be conducted during the appropriate blooming period for heartscale, California jewelflower, Kern mallow, and San Joaquin woollythreads (approximately April to May). Multiple surveys may be necessary to accommodate the different blooming periods for the target

species. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the surveys, the location of the individual plant or population will be recorded with a GPS device and impacts to individual plants or populations should be avoided. If Project-related impacts to special-status plants on the Project site are unavoidable, consultation with CDFW and/or USFWS may be required to develop a mitigation plan or additional avoidance and minimization measures, could include seed collection, off-site mitigation or transplantation.

BIO-2 **Biological Monitoring:** A qualified biologist shall be present to monitor all initial ground- disturbing and vegetation-clearing activities conducted for the Project. During each monitoring day, the biological monitor shall perform clearance survey "sweeps" at the start of each work day that vegetation clearing takes place to minimize impacts on special-status species with potential to occur. The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring shall take place until the Project site has been completely cleared of any vegetation. If an active nest is identified, the biological monitor shall establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS and/or CDFW shall be conducted and a mitigation plan shall be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.

BIO-3 **Focused Trapping Surveys for Special-Status Small Mammal Species:** San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse may be present within the Project site. Prior to ground disturbing activities, focused surveys for these species should be conducted by a biologist permitted by CDFW and USFWS to conduct surveys for San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse. Prior to conducting the trapping survey, a trapping plan shall be submitted to CDFW and USFWS, which details the proposed methods for the survey. The trapping survey should be conducted according to methodologies approved by CDFW and USFWS and according to the conditions of the permitted biologist's state and federal permits. If San Joaquin antelope squirrel, giant kangaroo rat, and/or Tipton kangaroo rat are determined to be present on or immediately adjacent to the Project site, the Project proponent shall initiate consultation with USFWS and CDFW to obtain the necessary incidental take permit authorizations and determine appropriate avoidance and/or minimization measures, which could include, but is not limited to, salvage trapping, relocation, translocation, and/or burrow excavation.

BIO-4 **Small Mammal and Reptile Exclusion Fence:** Due to the potential presence of special-status small mammal and reptile species adjacent to the Project site, an exclusion fence shall be installed prior to construction. The exclusion fencing shall be installed between the Project site and adjacent suitable habitat for special-status small mammal species. This barrier fencing shall be constructed of metal flashing, plastic sheeting, or other materials to prohibit San Joaquin antelope squirrel, special-status kangaroo rats, or special-status reptiles, including blunt-nosed leopard lizard from climbing the fence. The fencing shall be buried a minimum of 18 inches below grade and extend a minimum of 36 inches above grade. The fencing shall be inspected by a qualified biologist on a bi-weekly basis during construction activities to ensure fence integrity. Any needed repairs to the

fence shall be performed on the day of their discovery. If San Joaquin antelope squirrel, giant kangaroo rat, or Tipton kangaroo rat are found within the barrier fencing, construction shall cease, and the USFWS and CDFW shall be contacted for further guidance and consultation on additional measures. Fencing may be removed once construction activities are complete.

aBIO-5 **Pre-Construction Surveys for Burrowing Owl:** The Project site was determined to be suitable for burrowing owl due to the presence of suitable habitat and recent records of the species that have been recorded near the Project site. Prior to ground disturbing activities, preconstruction surveys for burrowing owl shall be conducted by a qualified biologist to ensure potential impacts to burrowing owl resulting from Project implementation will be avoided and minimized to less-than-significant levels:

a) A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct preconstruction surveys of the Project site, plus a 150-meter buffer, to locate active breeding or wintering burrowing owls and burrowing owl burrows between 30 and 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and will consist of walking parallel transects 7 - 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the CDFW and City of Taft Planning and Development Services Department.

b) A qualified biologist shall conduct an additional preconstruction survey of all impact areas plus an approximately 150-meter buffer no more than 24-hours prior to the start of ground-disturbing activities associated with construction activities to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures.

c) If no burrowing owls are detected, no further action is necessary. If burrowing owls are detected, no ground-disturbing activities shall be permitted within the distances listed in the CDFW *Staff Report on Burrowing Owl Mitigation*, unless otherwise authorized by CDFW. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

d) If any burrowing owl burrows are observed during the preconstruction surveys, avoidance measures shall be consistent with those included in the CDFW *Staff Report on Burrowing Owl Mitigation*. If avoidance of active burrows is not possible, the owls may, in consultation with CDFW be passively displaced from their burrows according to recommendations made in the 2012 *Staff Report on Burrowing Owl Mitigation*.

BIO-6 **Focused Blunt-Nosed Leopard Lizard Surveys:** Surveys for blunt-nosed leopard lizard (BNLL) shall be conducted according to the methods listed in the CDFW BNLL Protocol for projects leading to habitat removal (e.g. new road, solar development, oil development, residential development) (CDFW 2019). Adult BNLL surveys shall be conducted for 12 days over the course of the 90-day adult optimal survey period (April 15 to July 15), with a maximum of four survey days per week and eight survey days within any 30-day time period. At least one survey session should be conducted for four consecutive days. In addition to the 12 days of adult BNLL surveys required for activities in this category, five additional survey days shall be required during the hatchling optimal survey period (August 15 to September 30), with at least two survey days conducted between August 15 and August 30 and at least 2 survey days between September 15 and September 30, for a total of 17 survey days overall within the same survey season/calendar year. If BNLL are detected during the surveys the project proponent shall notify the CDFW Central Region Permitting and Project Review staff and USFWS shall be contacted to determine specific mitigation for the species, which could include additional surveys, monitoring, or acquisition of off-site mitigation lands.

BIO-7 **Pre-Construction Survey for San Joaquin Kit Fox:** The Project site was determined to be suitable for San Joaquin kit fox. Prior to development of the Project site, preconstruction surveys for San Joaquin kit fox shall be conducted by a qualified biologist to ensure potential impacts to San Joaquin kit fox resulting from Project implementation will be avoided and minimized to less-than-significant levels. The Survey shall follow the USFWS's *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). If any evidence of occupation of the Project site by San Joaquin kit fox is observed, a buffer shall be established by a qualified biologist that results in enough avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the USFWS and CDFW shall be contacted for further guidance and consultation on additional measures. If avoidance is not feasible the Project proponent shall initiate consultation with USFWS and CDFW to obtain the necessary incidental take permit authorizations and determine appropriate avoidance and/or minimization measures, which could include, but is not limited to, passive relocation, active relocation and/or burrow excavation.

The following buffer distances shall be established prior to commencement of any preparation of the Project site and/or construction activities:

a) San Joaquin kit fox potential den: 50 feet;
b) San Joaquin kit fox known den: 100 feet;
c) San Joaquin kit fox pupping den: contact the USFWS and CDFW

BIO-8 **San Joaquin Kit Fox Avoidance Measures:** Prior to and during construction activities, the Project proponent shall ensure that the Project complies with the following measures to avoid impacts to San Joaquin kit fox:

a) All pipes, culverts, or similar structures with a diameter of four inches or more that are stored within the Project site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped.
b) If any San Joaquin kit fox dens are found during preconstruction surveys, the status of the dens shall be evaluated no more than 14 days prior to Project ground disturbance. Provided that no evidence of kit fox occupation is observed, potential dens shall be marked, and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* by the lead biologist (USFWS 2011). If kit fox activity is observed at a den, the den status shall change to "known" per USFWS Guidelines (USFWS 2011), and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fox known, or pupping dens shall occur without prior authorization from the USFWS and CDFW.
c) To enable kit foxes and other wildlife (e.g., American badger) to pass through the Project site during construction, the perimeter security fence shall leave a five-inch opening between the fence mesh and the ground or the fence shall be raised five inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence.

d) To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the USFWS and CDFW shall be contacted.

e) Project-related vehicles shall observe a 15-mile-per-hour speed limit in all Project sites, except on County roads and federal and state highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated Project sites shall be prohibited.

f) All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from construction or Project site.

g) No pets shall be allowed in Project sites, except for trained canine animals related to security and operation of the facility.

h) All uses of herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the USEPA, California Department of Food and Agriculture, and federal and State legislation as well as additional Project-related restrictions deemed necessary by the CDFW and/or the USFWS.

i) No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary for Project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged but shall only be performed by qualified biologists and with written approval from the CDFW.

BIO-9 **Pre-Construction Nesting Bird Survey:** If construction or other Project activities are scheduled to occur during the bird breeding season (February through August for raptors and March through August for the majority of migratory bird species), a pre-construction nesting bird survey shall be conducted by a qualified biologist to ensure that active bird nests, including those for the Swainson's hawk, Le Conte's thrasher, and Loggerhead shrike, will not be disturbed or destroyed. The survey shall be completed no more than three days prior to initial ground disturbance. If construction is delayed more than three days after the survey, another survey shall be conducted no more than three days prior to commencement of ground disturbing activities in order to identify any new nests that have been built since the initial survey. The nesting bird survey shall include the Project site and adjacent areas where Project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If no active nests are identified, no further action is necessary. If an active nest is identified, a qualified biologist shall establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist.

BIO-10 **Crotch Bumble Bee Surveys and Coordination:** The Crotch bumble bee has a low potential to occur on the Project site and focused surveys shall be conducted to determine presence of the species. Coordination with CDFW on appropriate survey methods for this species will need to occur because there is no published survey protocol available. If the Crotch bumble bee is present on the Project site and Project impacts are unavoidable, then further coordination with CDFW will need to occur to develop a mitigation plan for the species. Mitigation measures may include seasonal work restrictions and additional biological monitoring.

b) **Less than Significant Impact.** In general, the Project site supports mostly nonnative grasses and forb species with scattered native shrubs. The Project site does not contain 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 Service. No Project-related impacts to these types of resources are anticipated with the development of the Project.

c) **Less than Significant Impact.** According to the Project Biological Technical Report (Appendix B), the Project site contains one potential aquatic resource (small drainage) located in the southeast corner of the Project site that could be considered jurisdictional to the state or as waters of the United States. The characteristics observed within this feature suggest that it likely conveys surface water and run off during periods of high precipitation. It is recommended in the Project Biological Technical Report that impacts to this feature be avoided during construction and operation. Should impacts to the drainage be necessary, a formal jurisdictional delineation would be required to be conducted to determine if it is subject to the jurisdiction of the CDFW or USACE. If jurisdictional features are identified on the Project site, coordination with the regulatory agencies (USACE, CDFW, RWQCB) regarding regulatory permitting would also be required. However, as shown in the Project site plan (Exhibit 3), the proposed Project would avoid the drainage by not conducting any grading in or around the area of the feature. To demonstrate avoidance of the drainage feature, the Project has been conditioned to require the Applicant to submit Drainage and Grading Plans clearly showing no construction activities will occur at the location of the drainage feature. This Condition of Approval will be enforced through the Civil Plan Check Review process. With avoidance of the drainage feature, potential impacts to state or federally protected wetlands would be less than significant.

d) **No Impact.** The Project site contains very little cover that would encourage wildlife movement. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project site during field surveys. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur during the development of the Project site.

e) **No Impact.** Based on the results of the October 2019 field survey, the Project site is completely disked and does not contain any trees or other resources protected by local policies or ordinances.

f) **No Impact.** The Project site is not located within an HCP or NCCP. Therefore, development of the Project site will not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional or state HCP.

V. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

A *Cultural Resources Inventory Report* was prepared for the Project by ECORP Consulting Inc. Environmental Consultants, which is dated December 2019, is included as Appendix C, and is the basis for the analysis in this section. ECORP conducted a cultural resource investigation for the Project site in October 2019. The inventory included a records search, literature review, and field survey. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the NRHP, CRHR, California Points of Historical Interest, California Landmarks, and National Historic Landmarks. Historic maps reviewed include:

- 1910 USGS Buena Vista Lake topographic quadrangle map (1:125,000 scale)
- 1950 USGS Taft, California topographic quadrangle map (1:24,000 scale)

Historic aerial photos taken in 1968, 1994, 2005, and 2010 (NETROnline) were also reviewed on October 24, 2019 by Paige Liss, for any indications of property usage and built environment. The local historical registry was reviewed, and no historical resources were found within one mile of the Project Site. The records search results indicated that 67 cultural resources were previously identified within a one-mile radius of the Project site. No cultural resources were previously documented within the Project site. The records search indicated that the Project site had been previously surveyed in 1977. The results of the Sacred Lands File search by the NAHC did not indicate the presence of any Native American cultural resources within one mile of the Project site. As a result of the field survey, six cultural resources were recorded inside the Project site: one historic-era site consisting of historic-period oil features, three pre-contact (prehistoric) isolates, and two historic-era isolates.

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) in September 2019 to request a search of the Sacred Lands File for the Project site and vicinity. The search was requested to determine whether or not Sacred Lands have been recorded by California Native American tribes within the Project vicinity, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The NAHC also provided a list of Native American groups that have historic or traditional ties to the Project site.

a) **No Impact.** According to the Project *Cultural Resources Inventory Report*, the Office of Historic Preservation's *Directory of Properties, Historic Property Data File* (dated December 18, 2012) indicated that no resources were listed within the Project site. In addition, the National Register Information System (National Park Service [NPS]) failed to reveal any eligible or listed properties within the Project site. The nearest National Register property is located over two miles to the southwest of the Project site in the City of Taft.

The review of historical aerial photographs and maps of the Project site provide information on the past land uses of the property and potential for buried archaeological sites. Based on this information, the Project site has been an undeveloped, relatively flat area used as an oil field from at least 1968 to the present.

The results of the Sacred Lands File by the NAHC were received on September 25, 2019 and did not indicate the presence of any documented Native American Sacred Lands within one mile of the Project site. The NAHC also provided a list of 13 Native American groups that have historic or traditional ties to the Project site who may have knowledge about the Project site. It should be noted that this does not constitute consultation in compliance with SB 18 or AB 52.

During the field survey, one historic-era site, three pre-contact isolates, and two historic-era isolates were identified. These resources are listed in Table 7 (Newly Recorded Cultural Resources Within the Project Site) and further descriptions are provided below.

Table 7
Newly Recorded Cultural Resources Within the Project Site

Resource Name or #	Type	Site Description	Age/ Period
ZG-002-I	Isolate	Lithic Core	Pre-Contact
ZG-003-I	Isolate	Diagnostic Glass Base	Historic
ZG-004	Site	Oil Mining Features	Historic
ZG-005-I	Isolate	Diagnostic Glass Base	Historic
ZG-007-I	Isolate	Unifacial Lithic Flake	Pre-Contact
ZG-008-I	Isolate	Possible Lithic Projectile Point Fragment	Pre-Contact

ZG-002-I (Lithic Core)

The isolate consists of a single edge-modified lithic core. The core measures 5cm x 4cm x 1.5cm. The material is a reddish-brown mottled cryptocrystalline silicate (CCS). The core contains nine major flake scars, with six edges showing utilization and one edge that shows unifacial pressure flaking (measures 3cm). The isolate was located on a graded dirt patch, approximately 5 meters to the north of a paved road.

ZG-003-I (Diagnostic Glass Base)

The isolate consists of a single historic-period diagnostic glass base. The glass base is brown in color with an Owens-Illinois makers mark and a date of 1946. The base measures 2 14/16 inches. The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project site.

ZG-004 (Historic Period Oil Fields)

ZG-004 consists of a set of features that are associated with the historic-period oil mining of the property. These consist of six wellheads with associated pipes and a valve, a wood-lined pit, and a cyclone separator. The site is in good condition; however, multiple OHV (off-highway vehicle) tracks run through the site and there is evidence of modern maintenance/upkeep on several of the features.

Wellheads. The wellheads are first denoted on the USGS Taft, CA topographic map dating to 1950. The site contains six wellhead features, all connected across the site by a series of underground pipes. Historical maps and records indicate that nine wellheads were previously located on the property. Based on information obtained from the California Geologic Energy Management Division (CalGEM, formerly the Division of Oil, Gas, and Geothermic Resources – DOGGR), wells drilled within the Project site were historically designated by the Standard Oil Company

as well numbers 1, 36, 37, 38, 40, 69, 70, 75, and 269. The wells have changed designation numbers with changes in ownership. However, for ease of reading, the historic numbers will be used throughout this report.

During the field survey the archaeologists identified six wellheads within the Project site. Based on information from the CalGEM, these identified wellheads likely correspond to well numbers 1, 37, 38, 75, and 69. In addition, one wellhead identified during the survey could not be assigned to a particular well number. This may correspond to historic-period well 70. Wells on the property that were not found during the survey include well 36, 40, and 269. The wellheads associated with these three wells may have been removed at the time they were plugged or have been damaged or buried.

Wellhead 1. The wellhead for well 1 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project site. The feature is mostly buried, unlike the others that extend approximately a foot above the ground surface. This wellhead was also in the worst condition, with a broken valve handle. The exposed portion of the pipe and wellhead measures 10-inches in diameter by 6-inches high.

Wellhead 37. The wellhead for well 37 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project site. Within 15 feet of the well, a shard of amethyst glass and a few crushed cans, mostly bi-metal flat tip with interlocking side seam (not measurable), were found. The exposed portion of the pipe and wellhead measures 3-feet by 3-feet by approximately 2-inches high.

Wellhead 38. The wellhead for well 38 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project site. The exposed portion of the pipe and wellhead measures 7-feet by 2-feet by 1.5-feet high.

Wellhead 69. The wellhead for well 69 is located approximately 30 feet to the west of Gas Company Road. The exposed portion of the pipe and wellhead measures 1-foot by 2-feet by 2.5-feet high.

Wellhead 75. The wellhead for well 75 was designated as 75-2 in the CalGEM data. The exposed portion of the pipe and wellhead measures 1-foot by 6-inches by 2.5-feet high. A partially buried pipe and valve were noted approximately 50-feet to the west of well 75-2.

Undesignated well. During the survey, a wellhead was located approximately 50 feet to the southwest of well 37. This particular wellhead is not marked on any maps. This wellhead location included a pad of concrete located 10 feet to the west of the metal pipe-head. It is unclear if this pad is historic in age, and it was not recorded as a feature. The exposed portion of the pipe and wellhead measures 6-feet by 6-inches high.

Wood-lined pit. This feature consists of a historic-period wood-lined pit, likely an oil drilling related feature. The feature measures 6-feet (N/S) by 6-feet (E/W) by 3.5-feet deep. The four sides of the pit are constructed with wooden planks and round nails. The pit is partially filled in with local soil/sand and plants. Surrounding the feature were rusted round nails, rusted miscellaneous metal fragments, fragmented pipes, glass shards (olive, clear, amethyst colored), wood and brick fragments, as well as patches of cement and asphalt with large conglomerates. This pit is located less than 30 meters from well 1.

Cyclone Separator and attached pipes. This feature consists of a cyclone separator with two associated vertical pipes and two associated signposts located in the southwestern corner of the Project site. The separator measures 5-feet by 5-feet by approximately 15-feet high. The cyclone separator has a modern sticker label placed on it that has a barcode and reads “Cyclone Separator 175184”. What appear to be new aluminum parts added to the cyclone separator and pipes are present. The separator, pipes, and signposts are all painted the same light green color and are heavily rusted. The signposts read “No Smoking” and “Gauge Setting West Section 17D.” The pipes connected

to the six wellheads described above all seem to be leading to this cyclone separator. Many of the metal pipes and levers attached to the separator have been disabled, and the separator and pipes appear to no longer be used.

ZG-005-I (Diagnostic Glass Bas)

The isolate consists of a single historic-period diagnostic glass bottle base. The glass bottle base is brown in color and, although it is fragmented, an Owens-Illinois makers mark is visible. The fragmented base measures 1 12/16-inches. Some shards of non-diagnostic clear and dark blue glass were also found nearby. The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project site.

ZG-007-I (Unifacial Lithic Flake)

The isolate consists of a single edge modified unifacial flake. The flake measures 3.5-cm length by 2.5-cm height by 1.5-cm width. The material is a reddish-brown mottled CCS. The isolate was located on a graded dirt trail, less than one meter to the east of a modern fence separating the Project site from the wastewater treatment facility to the south.

ZG-008-I (Possible Lithic Projectile Point Fragment)

The isolate consists of a single possible projectile point fragment. The point measures 3.5-cm length by 2-cm height by 1.5-cm width. The material is a clear/pink CCS with small crystal structures forming the base. The point exhibits utilization on both edges and is bifacially modified. The isolate was located on a patch of pushed asphalt, likely washed down from an unknown source upslope.

CRHR Evaluation

Under state law (CEQA) cultural resources are evaluated using CRHR eligibility criteria in order to determine whether any of the sites are Historical Resources, as defined by CEQA. CEQA requires that impacts to historical resources be identified and, if the impacts would be significant, that mitigation measures to reduce the impacts be applied. A Historical Resource is a resource that:

1. is listed in or has been determined eligible for listing in the CRHR by the State Historical Resources Commission;
2. is included in a local register of historical resources, as defined in PRC 5020.1(k);
3. has been identified as significant in a historical resources survey, as defined in PRC 5024.1(g); or
4. is determined to be historically significant by the CEQA lead agency [CCR Title 14, § 15064.5(a)].

In making this determination, the CEQA lead agency usually applies the CRHR eligibility criteria. For this Project, only the fourth definition of a historical resource is applicable because there are no resources previously determined eligible or listed on the CRHR, there are no resources included in a local register of historical resources, and no resources identified as significant in a qualified historical resources survey. The eligibility criteria for the CRHR are as follows [CCR Title 14, § 4852(b)]:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, § 4852(c)]. Historical buildings, structures, and objects are usually eligible under Criteria 1, 2, and 3 based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion 4, the potential to yield information important in prehistory or history. An archaeological test program may be necessary to determine whether the site has the potential to yield important data. The CEQA lead agency makes the determination of eligibility based on the results of the test program. Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR. Impacts to a historical resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, § 15064.5(a)].

Isolated Finds. Two historic-period and three pre-contact isolated finds (ZG-002-I, ZG-003-I, ZG-005-I, ZG-007-I, and ZG-008-I) were identified within the Project site as a result of this study. Isolated finds are artifacts that are not associated with other artifacts or features and are not connected with the human activity that produced them. Isolates do not individually contribute to the broad patterns of history because they cannot be connected to a particular historical event (NRHP Criterion A/CRHR Criterion 1). Isolates are similarly difficult to associate with specific individuals due to their lack of association with archaeological or historical sites, and generally no information exists in the archival record to associate isolates with important individuals in history (NRHP Criterion B/CRHR Criterion 2). Isolates do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values (NRHP Criterion C/CRHR Criterion 3). Finally, isolates in general have no context or associations and therefore cannot provide important information in history or prehistory (NRHP Criterion D/CRHR Criterion 4). Isolated finds do not meet the eligibility criteria for inclusion in the NRHP or CRHR as individual resources, and therefore, are not Historical Resources under CEQA. Development of the Project site would not result in any significant impacts to known Historical Resources under CEQA.

ZG-004 Oil Features

Archival Research Results. The Project site is located on the Buena Vista and Midway-Sunset oil fields, two of the largest oil fields in the United States today. Until January 1, 1958, the Buena Vista Field was considered to be part of the larger Midway-Sunset Field to the southwest; now, however, the two are considered to be geologically separate. The Project site contains wells associated with both the Buena Vista and Midway-Sunset oil fields. The first known well for the Sunset oil field (now Midway-Sunset oil field) was drilled in 1887 near the town of Maricopa. In 1903 the Midway oil field was joined with the Sunset oil field to form the Midway-Sunset Field. Over the next several decades additional wells were drilled in the Midway-Sunset Field throughout the San Joaquin Valley, and multiple towns including McKittrick, Oildale, and Moron (now Taft) were formed around the oil industry. One wellhead associated with the Midway-Sunset oil field is considered historically significant. The Lakeview Wellhead No. 1 is significant because it was the site of the largest accidental oil spill in history and is marked with NRHP landmark #485. The Lakeview Wellhead No. 1 is located near Maricopa, which is approximately 6.5 miles south of the Project site.

Archival research indicated that there were eight wells drilled on the property containing the Project site. A well labeled well 1 was the first well to be drilled in the Project site sometime before 1917 by K.T. & O. Company. However well 1 was not a great hole and by 1926, a proposal to abandon the well was submitted to the California State Mining Bureau by Standard Oil Company of California (now Chevron). Little information could be found on K.T & O Company with only one mention of a K.T. & O. oil well near Taft catching on fire in 1913. In 1926 the wells within the Project site were owned and operated by Standard Oil Company of California, an American company established in 1870 by John D. Rockefeller (Chevron 2019). Standard Oil Company dissolved into 34 smaller companies in 1911; one of these became Chevron, which owned the wells until 2000 (although Standard Oil

Company California shows up on forms for the wellheads in the Project site through the 1970s). Between 1926 and 1965, Standard Oil Company of California drilled seven additional wells (Numbers 36, 37, 38, 40, 69, 70, 75,and 269) on the property. During the early 1940s most of the wells underwent alterations to increase the oil supply coming from the field. All the wells in the Project site have been abandoned and plugged. The dates at which this occurred varies for each. Well 1 was abandoned in 1926, presumably at the time Standard Oil acquired the field. The remaining seven wells were abandoned around 1978, under ownership of Chevron U. S. A. with J. L. Rowland as the signee. All wells on site were plugged using the Perkins method, a common method to plug the holes with cement. Chevron U. S. A. transferred the ownership of the field to Crimson Resource Management Corporation in 2000. In 2010, Crimson Resource Management Corporation transferred ownership to Occidental of Elk Hills, Inc. In 2013, Occidental of Elk Hills, Inc. transferred to Vintage Production California LLC. Then, in February of 2016, it was transferred to California Resources Production Corporation and lastly, in March 2016, it was transferred to California Resources Elk Hills.

Evaluation. ZG-004 is a set of historic-period oil features consisting of six wellheads with associated pipes and valves, a wood-lined pit, and a cyclone separator. Archival research indicated that the site is a part of the historically mined Midway-Sunset oil field, one of the largest oil fields in the United States today, which was first mined in the 1880s. The first well on site (well 1) was drilled some time before 1917 and, as such, the site is associated with the early mining of the Midway-Sunset field. However, well 1 was not the first well dug in the Midway-Sunset oil field, nor was it the best producing, having been abandoned within a few years. The first well to exploit the Midway-Sunset oil field was drilled in Maricopa in 1887. The remainder of the wells in ZG-004 were constructed between 1926 and 1965, after the early years of oil production in the region. None of the wells in the Project site were associated with a significant gushing event. The NRHP-listed Lakeview Wellhead No. 1 is located in Maricopa and has no apparent association with the wellheads in the Project site. The wells in the Project site were installed by K. T. & O. Company. Little information is available about this company, and it appears to be one of many oil companies working in the region at the time. The first well drilled on the property appears to have been a bust and was abandoned by 1926. There are no indications that the features within ZG-004 were integral in the founding or growth of Taft or significant in the early oil industry within the region. There are currently no designated historic districts associated with the wells in the Project site or within the one mile records search area. Based on archival research, the area of greatest significance for the oil industry in the region is located in and around Maricopa. Thus, although the oil features within ZG-004 are associated with the oil industry in the region, they did not significantly contribute to the formation or success of the industry and, thus, are ***not eligible*** for the CRHR under Criterion 1 as an individual resource and it is not a contributor to a known historic district.

There are no available records stating the names of the people involved in K. T. & O. Company., the first company to drill for oil on the property. The property was subsequently sold to Standard Oil, a company founded by John D. Rockefeller. However, the wells on this property were a small portion of the vast property owned by Standard Oil and there is no indication that Mr. Rockefeller, nor any other prominent person in the company was ever personally involved in the mining of this site, nor were these wells the primary reason for the success of the company. The site is not significantly associated with a person or group of people important in history and the site is ***not eligible*** for the CRHR under Criterion 2.

All of the engineered structures at this oil field are standard or typical among oil fields. All techniques/ methods used in this oil field according to the well records for each well, appear to be typical among oil fields of this nature. The oil features associated with ZG-004 are typical and do not represent the work of a master or possess any high artistic values. Therefore, this site is ***not eligible*** under CRHR Criterion 3.

The data potential of this site lies in the historic record. The oil well structures have been removed and the wells have been abandoned and plugged. Although the site may contain a series of buried pipes that connect the individual wellheads and other features to the cyclone separator, it is unlikely that these pipes would reveal any information about the site not available in the archival record. The data potential for this site has been exhausted

through recording and archival research and site ZG-004 does not have the potential to yield additional important information in prehistory or history and is, therefore, ***not eligible*** under CRHR Criterion 4.

Lastly, this site is composed of the remnants of oil drilling features where the oil rigs have been removed and the existing wells have been abandoned and plugged. In addition, the cyclone separator shows evidence of having undergone some modern alterations and records show that the wells underwent alterations in the 1940s. The removal of the original oil structures and the alterations to the wells and cyclone separator has compromised the integrity of design, workmanship, and feeling of the site. Thus the site does not retain enough integrity to be considered eligible for the CRHR.

As a result of these findings, Site ZG-004 is evaluated as ***not eligible*** for listing in the CRHR under any criteria and lacks sufficient integrity to be significant and it is not considered a Historical Resource as defined by CEQA.

Conclusion. Sediments in the Project site consist of Holocene alluvial deposits that were deposited concurrently with human occupation of the region. The Project site is known to contain buried wells, pipes, and potentially other features associated with the historic-period oil mining on the property. The construction of these features and the use of the Project site as an oil field likely resulted in disturbances to the sediments throughout the area. These disturbances likely removed or displaced any pre-contact sites that were present within the surface or near surface sediments. There may be pockets of undisturbed alluvium present, but these are likely sporadically spaced throughout the site. Given the presence of known buried historic-period features coupled with the identification of several pre-contact isolated finds on the site, which may have been displaced through prior use of the area as an oil field, the likelihood of the site to contain subsurface cultural resources is considered high. Potential impacts to subsurface cultural resources are discussed in the following sections.

All six resources identified within the Project site were evaluated using CRHR eligibility criteria and were evaluated as ***not eligible*** for listing in the CRHR under any criteria. Because no Historical Resources as defined by CEQA were identified in the Project site, the proposed Project would not result significant impacts to known Historical Resources.

b) **Less than Significant with Mitigation Incorporated.** The Project site is known to contain buried historic-period pipes and potentially other features associated with ZG-004. Although this site is not considered a Historical Resource as defined by CEQA, and no mitigation is required for it, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources. The potential for subsurface resources within the Project site is considered high. CEQA requires the Lead Agency to address any unanticipated cultural resource discoveries during project construction. Therefore, Mitigation Measure **CUL-1** is required to reduce potential adverse impacts to less than significant. With incorporation of mitigation, impacts to archaeological resources will be less than significant.

Mitigation Measures

CUL-1 A qualified archaeological monitor working under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to monitor all ground disturbing activities within the Project site. If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery until the archaeologist can evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.

- If the professional archaeologist determines that the find represents a cultural resource that is associated with the historic-oil fields (ZG-004) but the new find would not alter the evaluation of that resource as not eligible for the CRHR, the archaeologist will record the new find for the archaeological record and construction will be allowed to continue.
- If the professional archaeologist determines that the find represents a cultural resource that is not associated with ZG-004 or could potentially alter the findings of the evaluation of that resource, he or she shall immediately notify the City and applicable landowner. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Kern County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

c) **Less than Significant with Mitigation Incorporated.** No known human remains have been identified during record searches or during the pedestrian survey of the Project site. The potential for uncovering significant resources, including Tribal Cultural Resources, at the Project site during construction activities is considered unlikely given that no such resources have been discovered during prior development activity on the site. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the proposed Project. Similar to the discussion regarding archaeological resources above, it is still possible to encounter buried human remains during construction activities. The proposed Project could have potentially significant impacts to previously undiscovered human remains; however, Mitigation Measure **CUL-1** is incorporated to reduce this impact to less than significant.

VI. Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state of local plan for renewable energy or energy efficiency?				X

a) **Less than Significant Impact.** The proposed Project, a solar energy generation and storage facility with associated appurtenances, would be subject to all applicable Federal, State, and local building regulations, including the California Building Code (CBC) as approved by the Taft Building & Safety Division. The proposed Project could potentially have a significant impact on the environment if it resulted in wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, or if it conflicts with or obstructs a state or local plan for renewable energy or energy efficiency. These potential impacts are discussed below.

Electricity

Construction of the Project would require the use of nonrenewable construction material, such as concrete, metals, and plastics. The project would be constructed in up to four (4) phases and each phase would be built over an up-to fourteen (14)-month period. Each construction phase would consist of up to 2MW AC of solar modules and two battery energy storage containers (or 2MW BESS equivalent) with all associated appurtenances. Each phase could be constructed individually on a serial basis, or multiple phases could be constructed concurrently as appropriate to accommodate market demand and Project economics. Large amounts of energy would not be expended, and all construction vehicles would comply with federal and state standards for on- and off-road vehicles (e.g., emission standards set by the California Air Resources Board), meaning wasteful usage of energy would not occur. Construction-related impacts would therefore be less than significant.

The proposed solar energy generation and storage Project, when complete, would operate to provide renewable electrical energy for a period of up to 30 years. Electricity generated by the Project would be sold to an electric utility purchaser or another power purchaser under a long-term contract, power purchase agreement (PPA), or via the California Independent System Operator (CAISO) wholesale electricity markets, before being decommissioned and the site returned to its pre-Project condition. As such, operation of the Project would not lead to wasteful, inefficient, or unnecessary consumption of energy resources during operation. Impacts will be less than significant.

Fossil Fuels

During construction of the Project, energy in the form of gasoline and diesel petroleum (fossil fuels) will be used to fuel construction vehicles and construction-worker vehicles traveling to and from the site. However, construction vehicles are manufactured and maintained according to Federal and State regulations aimed at reducing fossil fuel consumption. In addition, construction activities are temporary and will cease upon completion of Project development As such, construction of the Project will not lead to wasteful, inefficient, or unnecessary consumption of fossil fuels during construction. Impacts will be less than significant.

Energy, in the form of fossil fuels, would also be used to fuel vehicles traveling to and from the site to inspect, repair or maintain the facilities over the course of the Project's operational lifetime. However, as described in Section 2.17, Transportation, vehicle maintenance trips would be irregular (typically once or twice a year), and operation of the solar energy generation and storage facility would not generate daily trips. As such, operation of the Project will not lead to wasteful, inefficient, or unnecessary consumption of fossil fuels during operation and impacts will be less than significant.

b) **No Impact.** As noted in the City's 2010/2017 General Plan Energy Resources Element, the City of Taft has adopted goals to address energy resources, including: being a leader in energy production (Goal E-1), encouraging diversification of Taft's energy economy (Goal E-4), being a leader in development of alternative energies (Goal E-5), and minimizing the City's economic susceptibility to fluctuations in oil production levels (Goal E-6).[6] The City of Taft 2010/2017 General Plan Energy Resources Element also identifies several policy measures for projects to identify consistency with:

Policy E-1 Assert and promote the area's role as a major energy producer.
Policy E-3 Actively encourage energy research and demonstration projects which would be positive for the area and not conflict with adopted plans and programs.
Policy E-18 Require the siting of alternative energy facilities for the production of wind, solar, cogeneration, geothermal resources, and other alternative energies in accordance with provisions of the Taft Municipal Codes.
Policy E-19 Facilitate the development of sustainable energy resources and alternative energy projects.
Policy E-20 Facilitate domestic and commercial solar energy uses.

In addition, the City of Taft 2017 Climate Action Plan emphasizes encouraging development of renewable energy projects for the production of wind, solar, cogeneration, geothermal resources, and other alternative energies.[7] The City has encouraged projects that can generate excess revenue for business owners that would otherwise have vacant land, and the City amended the Taft Zoning Ordinance to allow for ground-mounted solar photovoltaic systems, wind energy generation systems, and other alternative energy resources on industrial land or vacant land as suitable. The City has also developed site design standards for ground-mounted solar photovoltaic systems, wind energy generation systems, and other alternative energy resources that reduce environmental, visual, and noise impacts and encouraged renewable energy developers to relocate near existing transmission lines to the extent feasible.

The Climate Change Scoping Plan is the state's roadmap to reach the greenhouse gas reduction goals required in the Global Warming Solutions Act of 2006, or AB 32.[8] This plan calls for an ambitious but achievable reduction in California's carbon footprint – toward a clean energy future. Reducing greenhouse gas emissions to 1990 levels means cutting approximately 30% from business-as-usual emissions levels projected for 2020, or about 15% from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020. This challenge also represents an opportunity to transform California's economy into one that runs on clean and sustainable technologies, helping secure our energy independence and security, and ensure that all Californians are able to enjoy their rights to clean air, clean water, and a healthy and safe environment. The AB 32 Scoping Plan includes several key strategies aimed at achieving these goals. One of the key strategies of the AB 32 Scoping Plan involves Electricity and Energy, with the State having a goal of 33% renewables by 2020.

Instead of conflicting with these state and local renewable energy and energy efficiency plans, the proposed solar energy generation and storage Project would have the effect of helping to achieve the stated goals of these plans. The Project would help the City achieve its goals of being a leader in energy production and in the development of alternative energies, diversifying Taft's energy economy, and minimizing the City's economic susceptibility to fluctuations in oil production levels. The Project will similarly have the effect of helping the city achieve the goals

laid out in the Climate Action Plan to encourage the development of renewable energy projects. Additionally, the project will help the State of California achieve its AB 32 Scoping Plan targets of 33% renewable energy by 2020. As such, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

VII. Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial direct or indirect risks to life or property?			X	
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?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

A *Geotechnical Engineering Investigation Report* for the Project site was prepared by BSK Associates, which is dated November 19, 2019, and is included as Appendix D. The analysis in this section of the Initial Study is based on the information provided in the *Geotechnical Engineering Investigation Report*. A field investigation was conducted under the oversight of BSK on October 7 and October 8, 2019, in which fourteen (14) borings were drilled using a Mobile B-61 Drill Rig provided by Baja Exploration. The borings were drilled to a maximum depth of 41.5 feet beneath the existing ground surface (bgs) and backfilled with the soil cuttings and surrounding soil. Additionally, three (3) percolation tests were conducted in the vicinity. Laboratory tests were performed on selected soil samples to evaluate moisture content, dry density, shear strength, collapse potential, moisture-density relationship, fines

content, and corrosion characteristics. Boring logs, soil classification charts, and a description of the laboratory test methods and results are included in Appendix A of the *Geotechnical Engineering Investigation Report*.

a.i.) **Less than Significant Impact.** According to the *Geotechnical Engineering Investigation Report* prepared for the Project, the project site is not located in a Alquist-Priolo (A-P) Fault Hazard Zone. The closest A-P Hazard Zone fault is the Buena Vista fault, located approximately 0.8 miles north of the site and the San Andreas fault zone approximately 10.6 miles southwest of the site. Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements. There are no mapped areas that have Seismic Hazard Zones in the Project site. Therefore, impacts related to the risk of loss, injury, or death involving the rupture of a known fault would be less than significant.

a.ii) **Less than Significant Impact.** The Project site is subject to strong seismic ground shaking, as are the majority of properties in Southern California. Since the Project consists of a solar energy generation and storage facility, the Project would not expose people or critical structures to adverse effects resulting from seismic-related ground shaking. In addition, the Project facilities are specifically designed to withstand seismic conditions anticipated to occur at the Project site. As discussed in Section VII.a.i. above, the seismic conditions expected to occur at the Project site can be mitigated by special design using reasonable construction and/or maintenance practices in the current California Building Code (CBC). Therefore, seismic-related impacts related to strong seismic ground shaking would be less than significant.

a.iii) **No Impact.** Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition when subjected to high intensity ground shaking. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table (within 50 feet of the surface). Affected soils lose all strength during liquefaction and foundation failure can occur. According to the *Geotechnical Engineering Investigation Report* prepared for the Project, there are no mapped liquefaction areas in the Project site. In addition, the Project site is located in an area with deep groundwater, and thus not subject to liquefaction susceptibility. The proposed Project would not expose people or structures to seismic-related ground failure, including liquefaction. No impact will occur.

a.iv.) **No Impact.** According to the *Geotechnical Engineering Investigation Report* prepared for the Project, the Project site is located in an area that is relatively flat and there is no potential for landslides. No impacts would occur.

b) **Less than Significant Impact.** Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. The Project has the potential to expose surficial soils to wind and water erosion during construction activities. Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), The purpose of this rule is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions. As part of this rule, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. These activities include, but are not limited to applying water regularly to unpaved areas, use of non-toxic chemical or organic dust suppressants, limiting construction vehicle speeds on unpaved roads, installation of wind barriers, cessation of construction activities during high-wind events, installation of trackout devices, etc. Water erosion would be prevented through the City's standard erosion control practices required pursuant to the CBC and the National Pollution Discharge Elimination System (NPDES) regulations, such as silt fencing, fiber rolls, or sandbags.

Following Project construction, the site itself would consist of a solar energy generating and storage facility. Therefore, impacts related to soil erosion would be less than significant with implementation of existing regulations.

c) Less than Significant Impact. Impacts related to liquefaction and landslides are discussed above in Sections a.iii and a.iv. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Such movement can occur on slope gradients of as little as one degree. Lateral spreading typically damages pipelines, utilities, bridges, and structures. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. Collapse refers to a soil settling under its own weight when saturated with water. However, adherence to the recommendations of the Project *Geotechnical Engineering Investigation Report* and the requirements of the CBC would ensure impacts related to soil collapse are less than significant.

d) **Less than Significant Impact.** According to the Project *Geotechnical Engineering Investigation Report*, the subsurface material at the Project site generally consists of fine to coarse grained silty sand with clay and sandy clay in the upper 5 feet. The material varies from silty sand with clay, clayey silty sand, sandy clay, and clay throughout to the bottom of the boreholes. Based on the results of the consolidation test, the on-site soils below 5 feet are considered to have a low potential for hydrocompaction. The upper 5 feet of material is anticipated to have low potential for expansion with an expansion index of 25 at Boring B-8. The CBC requires special design considerations for foundations of structures built on soils with expansion indices greater than 20 that occur at a depth of four feet or less below grade. With adherence to the special design considerations for foundations and structures, the proposed Project will have less than significant impacts related to soil expansion. Impacts will be less than significant.

e) **No Impact.** The proposed Project includes a solar energy generating and storage facility and related appurtenances. However, the proposed Project does not include any facilities that would connect to existing sewer lines, and septic tanks will not be used as part of the Project. No impacts would occur.

f) **Less than Significant with Mitigation Incorporated.** The proposed Project could have potentially significant impacts to a previously undiscovered paleontological resource or unique geologic feature if such a resource or feature is discovered during construction activities on the Project site. However, implementation of Mitigation Measures **GEO-1** through **GEO-4** would reduce potentially significant impacts to previously undiscovered paleontological resources or unique geological features to a less than significant level.

Mitigation Measures

GEO-1 **Conduct Paleontological Sensitivity Training for Construction Personnel:** The Applicant shall retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training would include a handout and would focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary.

GEO-2 **Monitor Construction Excavations for Paleontological Resources at all depths and strata's below five (5) feet:** The Applicant shall retain a qualified paleontological monitor, who would work under the guidance and direction of a professional paleontologist, who meets the qualifications set forth

by the Society of Vertebrate Paleontology. The paleontological monitor shall be present during all construction excavations including, but not limited to grading, trenching, boring, and clearing/grubbing). Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring shall be based on the rate of excavation and grading. Paleontological monitoring levels can be reduced if appropriate, at the discretion of a professional qualified paleontologist.

GEO-3 **Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered:** In the event that paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until appropriate paleontological treatment plan has been approved by the Applicant and the City. Work shall be allowed to continue outside of the buffer area. The Applicant and City shall coordinate with a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing.

GEO-4 **Prepare Report Upon Completion of Monitoring Services:** Upon completion of the above activities, the professional paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to the Applicant, the City, the Southern San Joaquin Valley Information Center at California State University, Bakersfield, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

VIII. Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				X

An *Air Quality and Greenhouse Gas Assessment* was prepared for the proposed Project by ECORP Consulting Inc. Environmental Consultants, which is dated October 2019, and is included as Appendix A. The information in this section of the Initial Study related to generation of excessive greenhouse gas emissions and plan conflicts is based on the analysis provided in the *Air Quality and Greenhouse Gas Assessment*. Greenhouse gas impacts were assessed in accordance with methodologies recommended by California Air Resources Board (CARB) and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Where greenhouse gas emissions quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Project construction-generated greenhouse gas emissions were calculated using CalEEMod model defaults for Kern County. Operational greenhouse gas emissions were based on the Project site plans.

a) **Less than Significant Impact.** The SJVAPCD provides a tiered approach in assessing significance of project-specific GHG emission increases. Projects implementing Best Performance Standards (BPS) would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29-percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact. The BAU approach was developed consistent with the GHG emission reduction targets established in the Scoping Plan. However, the BAU portion of the tiered approach is problematic based on the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife* (referred to as the Newhall Ranch decision hereafter). This California Supreme Court ruling confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no- significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method." A 29-percent reduction in GHG emissions from BAU (known as the BAU Threshold) is not supported by quantitative parameters.

The issue of setting a GHG threshold is complex and dynamic, especially in light of the Newhall Ranch decision. But the California Supreme Court ruling highlighted the need for the threshold to be tailored to the specific proposed development type, its location, and the surrounding setting. Therefore, the threshold used to analyze the Project is specific to the analysis herein and the lead agency (City of Taft) retains the ability to develop and/or use different thresholds of significance for other projects in its capacity as lead agency and recognizing the need for the individual threshold to be tailored and specific to individual projects.

Because there are no formal adopted GHG emissions thresholds, use of the mass emission thresholds of significance developed by Sacramento Metropolitan Air Quality Management District (SMAQMD) is recommended to be used for evaluating construction- and operation-related GHG emissions. The SMAQMD administers air emissions in the Sacramento Valley Air Basin, which is located in the Great Central Valley similar to the SJVAB. Thus, the geographic features influencing air emissions in the SJVAB are the same as those influencing the Sacramento Valley Air Basin. These thresholds are available in the SMAQMD CEQA Guide, last updated in February 2016. The SMAQMD recommends a two-tiered approach for assessing a project's operational emissions. The two-tier framework is recommended by all air districts in the Sacramento region and is retained in this analysis. SMAQMD's first-tier

threshold was directly derived from the statewide year 2020 reduction targets established by AB 32, were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provides guidance to CEQA practitioners with regard to determining whether GHG emissions from a proposed project are significant. The first tier consists of comparing a project's annual operational emissions to SMAQMD's recommended mass emission threshold. The first tier gives lead agencies the ability to assess smaller projects and conclude that each development proposal would not necessarily make a considerable contribution to the cumulative impact of climate change. The second tier consists of evaluating a project's consistency with California's GHG reduction targets. In light of the Newhall Ranch decision, the second-tier threshold is no longer applicable. Based on this discussion, the following thresholds are applied to this analysis:

- For the evaluation of construction-related emissions, if the mass emissions associated with construction of the Project would exceed of 1,100 metric tons of CO_2e per year ($MTCO_2e$/year) then they would be cumulatively considerable.
- For the evaluation of operational emissions, such would not have a significant impact on the environment if they are less than 1,100 $MTCO_2e$/year.

Where quantification was required, GHG emissions were modeled using the CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were calculated using CalEEMod model defaults for Kern County. Operational GHG emissions were based on the Project site plans.

Construction

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 8 (Total Project-Related GHG Emissions) illustrates the specific construction-generated GHG emissions that would result from construction of the Project. As shown in Table 8, construction-generated emissions would not exceed the recommended significance threshold.

Table 8
Total Project-Related GHG Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Annual (Maximum Metric Tons per Year)	
Construction in 2020	576
Construction in 2021	707
Significance Threshold	*1,100*
Exceeds Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emissions account for 2,000-square-foot energy storage system enclosures and the grading of 60 acres.

Operation

Operation of the Project would result in GHG emissions associated with minimal worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. Resultant emissions have been added to the operational totals identified in Table 9 (Operational Greenhouse Gas Emissions), which summarizes all the direct and indirect annual GHG emissions level associated with the Project. As shown in Table 9, operational-generated emissions would not exceed the recommended threshold of 1,100 metric tons of CO2e per year. Therefore, impacts will be less than significant.

Table 9
Operational Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Annual (Maximum Tons per Year)	
Area Source (landscaping, hearth)	0.00
Energy	0.00
Mobile	1.98
Waste	1.25
Water	0.02
Total	**3.25**
Significance Threshold	*1,100*
Exceeds Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emission estimates account for 1 permanent employee trip daily, lighting the Project site, water usage for cleaning the PV modules and the operation of a 2,000 square foot energy storage system enclosures.

b) **Less than Significant Impact.** The City of Taft Climate Action Plan (CAP) is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the City of Taft, consistent with the CEQA Guidelines and the SJVAPCD. The CAP identifies an overall strategy, including reduction measures and implementation actions, which the City will use to achieve the State-recommended GHG emission reduction targets for 2020, 2030, and 2050. In order to achieve 15-percent reduction by 2020, the City has implemented 49 measures that are a mixture of actions to encourage, incentivize, and mandate implementation. These reductions will all be a part of an implementation and monitoring program regulated by the City's staff. GHG emissions generated by energy sources account for all stages of the life cycle (including mining, construction, etc.), which are referred to as the cumulative GHG emissions and are usually expressed in grams of CO2e per unit of busbar electricity (i.e., gCO2/kWhe). When comparing various fossil-fueled energy generators, the GHG emissions generated are dependent on the type of fuel (i.e., gas, oil, coal). GHG emissions generated by some of the more common types of fossil-fueled plants and solar-power plants are summarized in Table 10 (Life-Cycle Greenhouse Gas Emissions for Various Types of Energy Generators).

As shown in Table 10, solar plants generate far less GHG life-cycle emissions (approximately 83 to 94 percent less) than fossil-fueled energy plants. Therefore, the proposed Project would contribute to the continued reduction of GHG emissions in the interconnected California and western U.S. electricity systems, as the energy produced by the Project would displace GHG emissions that would otherwise be produced by existing BAU power generation resources (including natural gas, coal, arid renewable combustion resources). The Project would generate a maximum of eight megawatts (8 MW) of electricity at any one time.

Table 10
Life-Cycle Greenhouse Gas Emissions for Various Types of Energy Generators

Fossil Fueled	
Coal	950 to 1,250
Oil	500 to 1,200
Gas	440 to 780
Solar	43 to 73[3]

Source: Weisser 2007
Notes:
[1] gCO_2e/kWh_e = grams of CO_2e per unit of busbar electricity.
[2] Emissions are based on lifecycle of energy source including mining, construction, operation, etc.
[3] Solar PV life-cycle emissions result from using fossil-fuel-based energy to produce the materials for solar cells, modules, and systems, as well as directly from smelting, production, and manufacturing facilities.

Table 11 (Proposed Project Displaced GHG Emissions), below, shows the emissions that would be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric).

Table 11
Proposed Project Displaced GHG Emissions (Metric Tons)

	Emissions (Metric Tons)			
	CO_2	CH_4	N_2O	CO_2e
Emissions Displaced Annually (metric tons)				
Displaced Natural Gas-Source Emissions	2,506	0	0	2,506
Displaced Coal-Source Emissions	542	0	0	542
Total	**3,048**	**0**	**0**	**3,048**
Emissions Displaced over 30 Years (metric tons)				
Displaced Natural Gas-Source Emissions	75,180	0	0	75,180
Displaced Coal-Source Emissions	16,260	0	0	16,260
Total	**91,440**	**0**	**0**	**91,440**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

Notes: In order to provide a conservative analysis, the proposed Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually). A heat rate of 10,000 Btu per kWh is assumed. The heat content of coal is assumed at 24 million Btu per ton of coal burned. Eight megawatts (17,520,000 annual kWh) x 10,000 heat rate = 233,698,107,347 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (90.95 percent). Coal constitutes 8.61 percent of all fossil fuel-based energy. Therefore, 56,961 million of the displaced Btu is displaced natural gas consumption and 5,386 million of the displaced Btu is displaced coal. At a rate of 24 million Btu per ton of coal burned, the Project would displace 224.4 tons of burned coal annually.

As shown in Table 11, the Project would potentially displace approximately 3,048 metric tons of CO2e per year, and approximately 91,440 metric tons of CO2e over the course of 30 years. While the Project would emit some GHG emissions during construction and a very small amount during operations, the contribution of renewable resource energy production to meet the goals of the Renewable Portfolio Standard (AB 32 Scoping Plan Measure E-3) would result in a net cumulative reduction of GHG emissions, a key environmental benefit. (AB 32 Scoping Plan Measure E-3, Renewable Portfolio Standard, of the AB 32 Climate Change Scoping Plan requires that all investor-owned utility companies generate 33 percent of their energy demand from renewable sources.) Therefore, the short-term minor generation of GHG emissions during construction which is necessary to create this new, low-GHG-emitting power-generating facility, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

Increasing sources of solar energy is one of the measures identified under AB 32 to reduce statewide GHG emissions. The proposed Project would reduce GHG emissions in a manner consistent with AB 32 and other California GHG-reducing legislation by creating a new source of solar power to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use. Additionally, the City's CAP includes strategies to reduce GHG emission and achieve set targets. The Project complies with GHG Reduction Measure RE-5, Renewable Energy Siting. This policy provision encourages the development of renewable energy projects within the City, as these projects can generate excess revenue for business owners that otherwise would have vacant land and the power generated can be part of a community-shared solar project. Therefore, the Project would not conflict with any applicable plan, policy, or regulation intended to reduce GHG emissions.

IX. Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project site?		X		
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires,?			X	

A *Phase I Environmental Site Assessment (ESA)* was prepared for the proposed Project by ENGEO Inc., which is dated November 19, 2019, and is included as Appendix E. The information in this section of the Initial Study related to hazards and hazardous emissions is based on the analysis provided in the *Phase I ESA*. The assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, and physical setting sources. The site assessment was performed in general conformance with the scope and limitations of ASTM E1527-13 and the standards and practices of the All Appropriate Inquiry – Final Rule (40 Code of Federal Regulations Part 312) . A reconnaissance of the Property was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use.

The site reconnaissance and records review did not find documentation or physical evidence of soil, soil gas, or groundwater impairments associated with the use or past use of the site. A review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the site and did not identify contaminated facilities within the appropriate American Society for Testing and Materials (ASTM) search distances that would reasonably be expected to impact the site. Based on the findings of the assessment, no Recognized Environmental Conditions (RECs), no historical RECs, and no controlled RECs were identified for the site. Based on the review of regulatory databases and site reconnaissance, ENGEO presented information on features of potential environmental concern that were either contained in the databases or observed on the Project site. These features were not considered to be RECs and are briefly discussed below.

- The Property was formerly part of the Buena Vista Oil Field and contains nine oil and gas wells that have since been plugged and abandoned under CalGEM standards.

As concluded by ENGEO, it is conceivable that unknown remnants of the Buena Vista Oil Field production may exist beneath the Project site. As such, if grading or foundation elements are planned, it was recommended by ENGEO that an environmental professional be retained to address potential adverse subsurface conditions associated with Buena Vista Oil Field. As a safety precaution, ENGEO also recommends to fill or cover remnant cellars on the Project site. However, ENGEO recommends no further environmental studies at this time and concludes the site is suitable for photovoltaic solar panel installation.

a) **Less than Significant Impact.** Implementation of the project could create significant hazards as a result of the routine transport, use, or disposal of hazardous materials during either construction or operation. These potential impacts are discussed below.

Short-term (Construction Period) Activities. Project construction activities would involve the temporary use and transport of fuels, lubricating fluids, solvents, and other hazardous materials. The contractor would be required to develop and adhere to a Health and Safety Plan, which pursuant to California state Health and Safety Code Chapter 6.95, Division 20 (§§ 25500-25532), would minimize potentially hazardous effects of handling potentially hazardous materials during construction. Project compliance with federal, state, and local regulations pertaining to safe transport, use, handling, and disposal of hazardous materials would reduce these effects, and this potential would be considered a less-than-significant impact.

Long-term (Operational) Activities. The proposed Project includes development and operation of a solar energy generation and storage facility and related appurtenances. Routine transport, use, or disposal of hazardous waste or materials is no associated with this type of use and the Project will only generate a nominal amount of Household Hazardous Waste (HHW) as a result of routine maintenance and cleaning operations. Disposal of HHW will be required to comply with federal, State and local regulations related to disposal of wastes. Compliance with these regulations would minimize potentially hazardous effects, and impacts would be less than significant.

b) **Less than Significant Impact.** As discussed above, the *Phase I ESA* conducted for the proposed Project revealed no evidence of "recognized environmental conditions" (RECs) on the Project site. During the site reconnaissance, it was determined that there are nine plugged and abandoned oil and gas wells on the Project site, but that it is still conceivable that unknown remnants of the oil field may exist under the Project site. The Geotechnical Engineering Investigation Report that was prepared for the Project includes recommendations for grading and foundation elements to address potential adverse subsurface conditions associated with the oil field. In addition, the Project is designed with a 10-foot non-build radius around each wellhead to ensure remaining remnants of the oil field are not contacted during construction activities or maintenance operations. Impacts related to upset and accident conditions with regard to the oil and gas wells will be less than significant.

The Phase I ESA did not identify the presence of any other possible hazardous materials present in the soils on the site, including pesticides and herbicides from past agricultural use, potential lead-based paint, or asbestos-containing materials (ACMs) that could result in the release of hazardous materials into the environment. However, with operation of solar PV generation and storage facilities comes risks associated with heat and toxic releases from accidental fire events. Sensitive receptors located in close proximity to solar PV generation and storage facilities similar to the proposed Project are at a higher risk of consequences associated with the potential impact of air toxics and fire conditions from such events, and these risks also pose a danger to first responders.

Apex Energy Solutions recently proposed development of a 20-megawatt Battery Energy Storage System facility in Santa Paula, California, which is similar to the proposed Project. In order to assess the potential impacts to nearby receptors from accidental fire conditions at the proposed facility, Apex conducted a *Hazards Consequences Analysis* in 2017.[9] The *Hazards Consequences Analysis* was conducted to determine the impacts from a toxic release and/or "credible" fire event. There are four hazardous substances that are potentially released during an accidental event within a BESS which may have an impact on nearby population. The hazardous substances include hydrogen chloride (HCl), hydrogen fluoride (HF), hydrogen cyanide (HCN), and carbon monoxide (CO). Based on a review of available publications, a credible fire event was determined to involve 1.5 battery modules, although a fire in a single module will not necessarily propagate to adjacent modules. Per the Considerations for Energy Storage System Fire Safety, the estimations limit of failure is 1.5 battery modules, with the presumption that the system should demonstrate adequate separations, cascading protections, and suppression systems to limit failure to a single cell or at least a single module. The probability of failure for multiple modules should be very low for systems with these active and passive barriers to catastrophic failure. Thus, the involvement of 1.5 battery modules within a credible fire event was a conservative assumption.

The results of the offsite consequences analysis showed that hazards impacts may extend to a distance of approximately 45 feet from the toxic release/credible fire event analyzed in the report and may require shelter in place and/or evacuation of nearby residences and commercial/light industrial uses within this toxic endpoint distance. The toxic endpoint distance of 45 feet may extend beyond the property line depending on the location of the toxic release/credible fire event. There is a wastewater treatment facility and industrial uses located to the south of the Project site; however, building setbacks at these locations combined with the proposed perimeter fence buffer on the Project site will ensure that no structures or persons within these locations will be inside the recommended 45-foot toxic endpoint distance from the proposed PV panels. In addition, firefighters approaching potential accidental fire events will be equipped with personal protective equipment (PPE) and self-contained breathing apparatus (SCBA) that will minimize the risks to first responders associated with toxic air releases. Therefore, impacts with regard to upset and accident conditions would be less than significant.

c) **Less than Significant Impact.** No known existing or proposed schools exist within one-quarter mile of the Project site. There are three schools within proximity of the Project site, Jefferson Elementary School (in the county unincorporated area of Ford City), Taft Primary School, and Lincoln Junior High School in the City of Taft. However, each of these schools is located at least 1.5 miles from the Project site. Impacts would be less than significant.

d) **Less than Significant Impact.** The Project is not located on a site listed on the state *Cortese List*, a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses.[10]

Based upon review of the *Cortese List*, the Project site is not:

- listed as a hazardous waste and substance site by the Department of Toxic Substances Control (DTSC),[11]
- listed as a leaking underground storage tank (LUFT) site by the State Water Resources Control Board (SWRCB),[12]
- listed as a hazardous solid waste disposal site by the SWRCB,[13]

- currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,[14] or
- developed with a hazardous waste facility subject to corrective action by the DTSC.[15]

No impact will occur in relation to hazardous materials sites.

e) **Less than Significant with Mitigation Incorporated.** The Project site is located approximately 0.75 miles northeast of Taft-Kern County Airport. According to the Kern County Airport Land Use Compatibility Plan, a small piece of the southeast portion of the Project site is located in Compatibility Zone B-1, while a majority of the Project site is located in Compatibility Zone C.[16] Compatibility Zone B-1 restricts development to a maximum density of 0.1 dwelling units per acre (du/ac) for residential uses or 60 people per acre (people/ac) for non-residential uses and requires location of structures a maximum distance from the extended runway centerline as well as a dedication of an Avigation Easement. Prohibited uses and uses not normally acceptable in Compatibility Zone B-1 include schools, daycare centers, libraries, hospitals, nursing homes, residential subdivisions, intensive retail uses, intensive manufacturing or food processing, offices with more than two stories, hotels/motels, and any other highly noise-sensitive uses (e.g. amphitheaters). Storage of flammable materials or any other hazards to flight operations is also prohibited in this Zone. Compatibility Zone C restricts development to a maximum density of 15 dwelling units per acre (du/ac) for residential uses or 150 people per acre (people/ac) for non-residential uses and requires dedication of an overflight easement for residential uses. Prohibited uses and uses not normally acceptable in Compatibility C include schools, hospitals, nursing homes, large shopping malls, theaters, auditoriums, large sports stadiums, and hi-rise office buildings with more than four stories. Hazards to flight operations are also prohibited in this Zone. The Project consists of a solar PV energy generation and storage facility and related appurtenances and will not include any full-time employees during operation. Also, because the Project does not propose residential uses, there would be no people residing onsite. The Project is not one of the prohibited uses or uses not normally accepted in Compatibility Zones B-1 or C. The Project will be required to dedicate an avigation easement to Taft-Kern County Airport District prior to issuance of building permits. This requirement is included as Mitigation Measure **HAZ-1**. With incorporation of Mitigation Measure **HAZ-1**, impacts related to public use airports will be less than significant.

Mitigation Measures

HAZ-1 **Avigation Easement Dedication:** As required in Section 4.9.3.2 of the Taft-Kern County Airport Land Use Compatibility Plan, an Avigation Easement shall be granted to Taft-Kern County Airport District before the issuance of a building permit. A copy of the easement shall be forwarded to the County and the affected airport. Finally, the property owner shall notify all renters, lessees or buyers that the site is subject to aircraft overflight from the airport, is subject to potential noise problems associated with aircraft operations, and is subject to an Avigation Easement. The information shall be provided before completion of final rental, lease or sale, and shall be incorporated into the Covenants, Conditions, and Restrictions (CC&Rs) recorded with the property and in all lease and rental agreements.

f) **Less than Significant Impact.** The Project would not interfere with an emergency response plan. Project equipment and facilities would not impair access to any surrounding property. Construction of the solar energy generation and storage facility would not occur within public rights-of-way and closures of public-rights-of-way will not occur. In addition, review of Project plans by the Kern County Fire Department would ensure that adequate emergency access and circulation would be provided. Therefore, potential interference by the Project with emergency response and emergency evacuation plans would be a less-than-significant impact.

g) **Less than Significant Impact.** According to the Taft General Plan, in recent years there have been numerous urban and wildland fires within Kern County and vicinity. In Kern County, forest and grass fires are the main types of wildland fires of concern. There have been 22 federal fire-related declarations for wildfire within Kern County

between 1955 and 2011, with 11 occurring since 2005. However, the major fires have been in the Sierra Nevada Mountains, extending from the Kern River Canyon to the Lake Isabella region, more than 37 miles northeast of the Project site. The Project site is designated as being in an area of moderate fire hazard severity. The Project Site is not located within or near any State Responsibility Areas or other wildland areas; however, the site is located in a Local Responsibility Area.[17] The Project does not propose any residential uses and would not include any on-site employees during operation. Therefore, the potential impact related to wildland fire would be less-than-significant.

X. Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in:				
i) result in substantial erosion or siltation on- or off-site;			X	
ii) substantially increase the rate or the amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

a) **Less than Significant Impact.** A project normally would have an impact on surface water quality if discharges associated with the project would create pollution, contamination, or nuisance as defined in Water Code Section 13050, or that cause regulatory standards to be violated as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for a receiving water body. For the purpose of this specific issue, a significant impact could occur if the proposed Project would discharge water that does not meet the quality standards of the agencies which regulate surface water quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the Project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Water Quality Management Plan (WQMP) to reduce potential post-construction water quality impacts.

Construction Impacts

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed Project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth-moving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment. During site grading and excavation activities, bare soil would be exposed to wind and water erosion. If precautions are not taken to contain sediments, construction activities could produce sediment-laden storm runoff. In addition to increased erosion potential, hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly.

The Project would be required to implement best management practices (BMPs) and best available technologies to reduce potential impacts to water quality that would result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, the applicant would obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Construction activities would comply with the conditions of the permit including preparation of a storm water pollution prevention plan (SWPPP), implementation of BMP's, and monitoring impacts, if any, to water quality. As part of this process, multiple BMP's would be implemented to provide effective erosion and sediment control. The BMP's that would be implemented as part of these conditions may include, but not be limited to, the following:

- Temporary erosion control measures such as silt fences, staked straw bales, silt/sediment basins and traps, check dams, sandbag dikes, and temporary re-vegetation or other groundcover would be employed for disturbed areas.
- Storm drain inlets on the site and in downstream offsite areas would be protected from sediment with the use of BMP's acceptable to the City of Taft, local jurisdictions and the California Regional Water Quality Control Board, Central Valley Region.
- Dirt and debris would be swept from the construction zone on a regular basis, particularly before predicted rainfall events.
- No disturbed surfaces would be left without erosion control measures in place from early fall to early spring (October 15 and April 15).

As such, impacts associated with construction would be reduced to less than significant with the adherence existing regulations and no mitigation is required.

Operational Impacts

The proposed solar PV panels would be mounted on post footings, which would not result in substantial increased impervious surfaces on the site. Some impervious surfaces will be introduced to the site in the form of concrete pads under the proposed battery storage containers and a paved access road. However, the proposed Project would be subject to post-construction BMP methods to address increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements. Common post-construction BMPs include filtering stormwater through vegetated areas prior to discharge into the City's storm drain system or retaining stormwater on-site to filter back into the groundwater. The proposed Project will remain almost entirely pervious surfaces upon completion. Stormwater would dissipate directly into the natural soil on the site. Therefore, impacts would be less than significant with adherence to existing regulatory requirements.

b) **Less than Significant Impact.** The proposed Project would not require the use of water during operation, other than for infrequent maintenance and cleaning operations. Therefore, the operation of the solar energy Project would not substantially decrease groundwater supplies, interfere with groundwater recharge, nor impede sustainable groundwater management of the basin.

c.i) **Less than Significant Impact.** According to the City of Taft General Plan EIR, the Project site lies within sub-basin J7 of the Sandy Creek watershed.[18] A tributary of Sandy Creek lies immediately to the west of the Project site, and there are no other drainage features located on the Project site or in the Project area. The tributary of Sandy Creek does not lie within the Project site and would not be impacted by either construction or operation of the Project. The Project would not lead to a substantial alteration of existing drainage patterns in the area that could result in substantial erosion or siltation on- or off-site. Therefore, the impact is less than significant.

c.ii) **Less than Significant Impact.** As discussed in Section IX(c.i), a river or stream does not lie within the proposed Project site. Additionally, the Project would not lead to a substantial alteration of existing drainage patterns in the area. Therefore, the impact is less than significant.

c.iii) **Less than Significant Impact.** As discussed in Section IX(a), the Project would not result in substantial increase in impervious surfaces on the site. Therefore, the Project would not 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. The impact would be less than significant.

c.iv) **Less than Significant Impact.** According to the City of Taft General Plan EIR, the Project site is not located within a Special Flood Hazard Area for the City.[19] The nearest such area is Sandy Creek located approximately a quarter mile to the southwest of the Project site. As discussed in Section IV(c) above, the Project site contains one small drainage feature located in the southeast corner of the Project site that likely conveys surface water and run off during periods of high precipitation. As shown in the Project site plan (Exhibit 3), the proposed Project would avoid the drainage by not conducting any grading in or around the area of the feature. To demonstrate avoidance of the drainage feature, the Project has been conditioned to require the Applicant to submit Drainage and Grading Plans clearly showing no construction activities will occur at the location of the drainage feature. This Condition of Approval will be enforced through the Civil Plan Check Review process. With avoidance of the drainage feature, potential impacts to state or federally protected wetlands would be less than significant. The Project would not impede or re-direct flood flows under the flood scenario. Therefore, the impact would be less than significant.

d) **Less than Significant Impact.** As discussed in Section IX (c.iv), the Project site does not lie within a Special Flood Hazard Area as designated by the City. According to the General Plan EIR, a review of the Office of Emergency Services (OES) and Army Corps of Engineers Dam Inundation Mapping for the Planning Area indicates that the eastern third of the Planning Area which includes the Kern Lake Bed, Buena Vista Lake Bed, and the Tupman area is within the “inundation area” and would be affected should a failure occur at the Isabella Lake Dam located 49 miles northeast of the City of Taft. The City of Taft has original copies of the OES and Corps of Engineers Dam Inundation Maps for public review. However, the Project site is not located in the eastern third of the Planning Area and will not be affected by failure of Isabella Lake Dam. The Project site is not subject to tsunami due to its elevation (over 760 feet) and distance from the ocean (over 50 miles). While there is the possibility of seiche from lakes that are located northeast of the City, the proposed Project is not located within the vicinity of these water bodies and would not have the potential to be affected by seiche waves. Therefore, impacts would be less than significant.

e) **Less than Significant Impact.** The Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs to protect all waters in the region. Development of the Project would be required to adhere to requirements of the water quality control plan, including all existing regulation and permitting requirements. This would include the incorporation of best management practices (BMPs) to protect water quality during construction and operational periods. Development of the Project would also be subject to all existing water quality regulations and programs, including all applicable construction permits. Existing General Plan policies related

to water quality would also be applicable to the Project. Implementation of these policies, in conjunction with compliance with existing regulatory programs, would ensure that water quality impacts related to the Project would be less than significant.

XI. Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

a) **No Impact.** The Project site is located in the northeastern portion of the City, which is largely undeveloped and characterized by industrial and commercial land uses. As such, the Project use would be consistent with the general uses in the vicinity and therefore would not divide an established community.

b) **No Impact.** The proposed Project site is designated for industrial and commercial uses. As the analysis herein shows, the Project would avoid significant environmental impacts with the implementation of mitigation measures. Therefore, implementation of the proposed Project would not conflict with applicable plans, policies and regulations adopted for the purpose of avoiding or mitigating environmental effects.

XII. Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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?				X

a) **No Impact.** According to the California Department of Conservation Mineral Land Classification system, the Project site is located in Mineral Resource Zone 3 (MRZ-3), which consists of areas containing mineral deposits, the significance of which cannot be evaluated from available data.[20] There are currently no known mineral resource deposits on the Project site. At completion of Project operation the facility would be deconstructed and the site would be returned to its current state. Therefore, the Project would not result in the loss of availability of a known mineral resource. No impacts would occur.

b) **No Impact.** The Project site is currently undeveloped. Upon Project completion, the solar storage facility would be deconstructed and the site would be returned to its current state. Therefore, the Project would not result in the loss of availability of a locally important mineral resource recovery site. No impacts would occur.

XIII. Noise

Would the project result in	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project site to excessive noise levels?			X	

A *Noise Impact Assessment* was prepared for the proposed Project by ECORP Consulting Inc. Environmental Consultants (ECORP), which is dated October 2019, and is included as Appendix F. The information in this section of the Initial Study related to generation of substantial temporary or permanent increases in ambient noise levels, excessive groundborne vibration, and airport noise is based on the analysis provided in the *Noise Impact Assessment*. The assessment of the existing and future noise environments is based on noise-prediction modeling and empirical observations. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (2008). Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from the Caltrans guidelines. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses. In order to estimate the worst-case operational noise levels that may occur at the nearest noise-sensitive receptor, onsite operational noise levels have been calculated with the SoundPLAN 3D noise model (which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers), coupled with noise measurements that were taken by ECORP at an existing solar energy generation facility. Specifically, ECORP conducted a 30-minute reference noise measurement within the IVC solar generation facility in Imperial County with a Larson Davis SoundExpert LxT precision sound-level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. This reference measurement identified an ambient noise environment of 47.1 dBA at the existing solar energy generation facility. Therefore, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with Project operations.

a) **Less than Significant Impact.** The Noise Element of the General Plan provides policy direction for minimizing noise impacts on the community and for coordinating with surrounding jurisdictions and other entities regarding noise control. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, noise considerations will influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems. The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at

locations within Taft that would negatively affect noise-sensitive land uses. Uses such as schools, hospitals, child care, senior care, congregate care, churches, and all types of residential use should be located outside of any area anticipated to exceed acceptable noise levels as defined by the Noise and Land Use Compatibility Guidelines, or should be protected from noise through sound attenuation measures such as site and architectural design and sound walls. The City of Taft has adopted these guidelines in a modified form as a basis for planning decisions based on noise considerations. These guidelines are shown in Table 12 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources) and include interior and exterior noise levels. In the case that the noise levels identified at a proposed project site fall within levels considered acceptable, a project is considered compatible with the existing noise environment.

Table 12
Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources

Land Use	Interior Spaces (L_{dn}/CNEL, dB)	Outdoor Activity Areas (L_{dn}/CNEL, dB)		
		Acceptable	Conditionally Acceptable	Conditionally Unacceptable
Residential, Low Density Single-Family, Duplex, Mobile Homes	45	55-65	65-75	75-Above
Residential, Multi-Family	45	55-65	65-75	75-Above
Transient Lodging – Hotels, Motels	45	55-65	65-75	75-Above
Mixed Use	45	55-65	65-75	75-Above
Schools, Libraries, Churches, Hospitals, Nursing Homes	45	55-65	60-70	75-Above
Auditoriums, Concert Halls, Amphitheaters	-	-	55-70	-
Sports Area, Outdoor Spectator Sports	-	-	55-75	-
Playgrounds, Neighborhood Parks	-	55-70	70-75	-
Office Buildings, Businesses, Commercial and Professional	-	55-70	70-75	75-Above
Industrial, Manufacturing, Agricultural	-	55-75	70-80	75-Above

Source: City of Taft 2009

Notes:

Acceptable – (Mitigation Not Required) Specific land use is acceptable.

Conditionally Acceptable – (Mitigation Required) Use should be permitted only after careful study and inclusion of mitigation as needed to satisfy policies of Noise Element.

Conditionally Unacceptable – (Mitigation Required) Use may be infeasible. Use should be permitted only after careful study and inclusion of mitigation as needed to satisfy policies of Noise Element.

The City of Taft's Municipal Code regulates loud, unnecessary, and disturbing noise from various sources within the city. The City's Municipal Code does not, however, include specific noise standards for noise sources, nor does it identify specific hourly limitations for construction-related activity.

The Project site is located adjacent to unincorporated lands administered by the County of Kern. The Kern County Noise Element identifies goals, policies, and implementation measures that are used to guide development with regard to noise. The General Plan identifies residential areas, schools, convalescence and acute care hospitals, parks and recreational areas, and churches as noise-sensitive land uses. In noise- sensitive areas, exterior noise levels generated by new projects are to be mitigated to 65 dB Ldn or less in outdoor activity areas and 45 dB Ldn or less within interior living spaces or other noise-sensitive interior spaces. The Kern County Municipal Code, Section 8.36.020, prohibits noise generate from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends.

Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest noise-sensitive land use, located in unincorporated Kern County, is a single-family residence located approximately 0.40 mile northwest of the Project site at the West Side District Cemetery.

Existing Ambient Noise Environment

Taft is impacted by various noise sources. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the city that generate stationary-source noise. The Taft-Kern County Airport is located approximately one mile southwest of the Project site.

Analysis of Impacts

Short-Term Construction-Related Noise

Construction noise associated with the proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., building construction, paving). Noise generated by construction equipment, including earthmovers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive receptors in the vicinity of the construction site. Table 13 (Maximum Noise Levels Generated by Construction Equipment) indicates the anticipated noise levels of construction equipment. The average noise levels presented in Table 13 are based on the quantity, type, and acoustical use factor for each type of equipment that is anticipated to be used.

Table 13
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: FHWA, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2008.

As previously stated, the nearest noise-sensitive land use is a single-family residence located at the West Side District Cemetery approximately 0.40 mile, (2,112 feet) northwest of the Project site and is located in unincorporated Kern County. The noise levels from construction equipment at 50 feet range from 81.0 dBA to 70.0 dBA. The noise levels from construction operations decrease at a rate of approximately six dB per doubling of distance from the source. Thus, the noise levels at the nearest residence, 2,112 feet away, would range from 48.5 dBA to 37.5 dBA. These numbers fall below the exterior noise level threshold generated by new projects for noise-sensitive areas as presented in the Kern County General Plan.

Additionally, the City and County both limit the time that construction can take place but do not promulgate numeric thresholds pertaining to noise associated with construction. Specifically, Action N-4a of the Taft General Plan states that construction activity is exempt from City noise standards as long as it is conducted between the hours 6:00 a.m. and 7:00 p.m. Monday through Friday, and between 6:00 a.m. and 5:00 p.m. on weekends. Further, Section 8.36.020 of the County's Municipal Code prohibits noise generate from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends. Due to the fact that construction of the proposed Project will be occurring in the City of Taft, the City's construction noise standard is the most applicable to this analysis. It is typical to regulate construction noise with time limits as opposed to numeric noise thresholds since construction noise is temporary, short term, intermittent in nature, and would cease on completion of a project. Furthermore, the City of Taft is a developing urban community and construction noise is generally accepted as a reality within the urban environment. Additionally, construction would occur through the Project site and would not be concentrated at one point. Therefore, as long as construction activities are conducted within the permitted hours as required by the City of Taft General Plan Action N-4a, noise generated during construction activities would not exceed City noise standards. Short-term construction-related impacts would be less than significant.

Long-Term Operational Noise

Project Land Use Compatibility. The City of Taft's land use compatibility table (Table 12) provides the City with a tool to gauge the compatibility of new land users relative to existing noise levels. Table 12 identifies acceptable, conditionally acceptable, and conditionally unacceptable noise levels for various land uses, including low- density residential and commercial uses such as that of the Project site. In the case that the noise levels identified at the Project site fall within levels considered acceptable, the Project is considered compatible with the existing noise environment. As shown in Table 12, an acceptable noise level for locating residential uses is anything under 65 dBA CNEL and 70 dBA CNEL for commercial. The General Plan EIR includes ambient noise measurements and found that approximately 0.90 mile west of the Project site had an ambient noise measurement of 48.1 dBA. It can be assumed that the noise on the Project site is very similar to the ambient recorded measurement; as such it is an acceptable location for residential and commercial uses. However, as stated in Action N-5a, the City discourages all residential and noise-sensitive uses from being located near the airport. The Project site is located approximately one mile from the Taft-Kern County Airport and therefore is not an acceptable location for residential uses. The Project is proposing the construction of a 60-acre solar field and would not include the construction of any noise-sensitive uses. Therefore, for the reasons listed above, the Project site is an acceptable location for the desired land use and impacts related to land use compatibility will not occur.

On-Site Noise Sources. The main stationary operational noise associated with the Project would be from the proposed transformers, inverters, substation, and transmission lines. Onsite Project operations have been calculated using the SoundPLAN 3D noise model. As previously stated, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with the Project operations. The results of this model can be found in Appendix F. Table 14 (Modeled Operational Noise Levels) below, shows the predicted Project noise levels at the nearest noise-sensitive land use in the Project vicinity, as predicted by SoundPLAN.

Table 14
Modeled Operational Noise Levels

Location	Modeled Operational Noise Attributed to Project (L_{eq} dBA)	County Standard (L_{dn}, dB)	Exceed Standard?
Property line of the nearest residence.	26.9	65	No

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Appendix A for noise modeling assumptions and results.

Note: Reference noise measurement used to calculate Project onsite noise propagation identified at 47.1 dBA, per 30-minute measurements taken at a IVC solar generation facility in Imperial County.

As shown in Table 14, predicted noise levels as a result of Project operations have the potential to be 26.9 dBA at the nearest residence. This number falls below County standards and is less than what is currently being experienced in the area per the General Plan EIR. Therefore, operations of the proposed Project would not increase the ambient noise environment at the nearest residence and would not exceed County standards. Impacts will be less than significant.

Offsite Traffic Noise. Once under operation, the number of employees serving the Project site is anticipated to be minimal. Typical solar PV energy facilities require intermittent visits from an electrical engineer to periodically plan and coordinate operations and maintenance activities, as well as two to three instrumentation and controls technicians to perform maintenance and troubleshooting/repair activities. According to the 2013 Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, doubling of traffic on a roadway would result in an increase of three dBA (a barely perceptible increase). The vehicle trips to the site would be nominal compared to the vehicle trips currently experienced on vicinity roadways. For example, according to the General Plan EIR, Table 4.4-2, Cedar Street-Airport Road to SR 119, which runs adjacent to the Project site, accommodates approximately 655 vehicle trips per day. Operation of the proposed Project would not generate significant new daily motor vehicle trips in the area that would result in a perceptible increase in traffic noise levels. Impacts will be less than significant.

b) **Less-than-Significant Impact.** Project groundborne noise impacts are discussed under item (a) above, and impacts are determined to be less than significant.

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the proposed Project would be primarily associated with short-term, construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction as such equipment is not generally necessary for solar facility construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Typical groundborne vibration levels associated with construction equipment are summarized in Table 15 (Vibration Source Amplitudes for Construction Equipment).

Table 15
Vibration Source Amplitudes for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.082
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Source: FTA 2018; Caltrans 2004	

The City does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full-disclosure purposes. For comparison purposes, Caltrans' (2004) recommended standard of 0.2 inch per second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site is a building located at the wastewater treatment plant, approximately 50 feet to the south of the Project site. Based on the vibration levels presented in Table 15, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.089 inch per second peak particle velocity at 25 feet. Thus, structures located 50 feet away would not be negatively affected. Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Impacts will be less than significant.

c) **Less-than-Significant Impact.** The Project site is located approximately one mile northeast of the Taft-Kern County Airport. The Project site is located outside of the 60 dBA CNEL noise contour per Figure 4-69 of the Airport Land Use Compatibility Plan of Kern County. Implementation of the proposed Project would not affect airport operations or result in increased exposure of noise-sensitive receptors to aircraft noise. Impacts would be less than significant.

XIV. Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

a) **No Impact.** The proposed Project would not require any regularly employed staff for the operation of the facility. The only operations at the facility would be sporadic maintenance visits. Therefore, the proposed Project would not be expected to generate any new employment or induce any population growth in the City or region. Therefore, no impact would occur.

b) **No impact.** The proposed Project would occur on an undeveloped piece of land and, surrounded on three sides by undeveloped land, thus would not result in the displacement of any existing people or housing. No impact would occur.

XV. Public Services

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:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

a) **Less than Significant Impact.** The City of Taft contracts with the Kern County Fire Department to provide fire protection and prevention services within the City.[21] Primary service is provided through Station 21 located at 303 10th Street in the City of Taft. The proposed Project consists of a solar PV energy generation and storage facility to be constructed on a vacant parcel. All facilities would be constructed to current applicable code requirements using materials that would minimize potential fire related issues. The Project would not spur the growth of the region in an unplanned manner that would place unexpected future demands on existing fire services. As such, it would not require the building of new fire protection related buildings or structures. There would be a less than significant impact related to fire protection services.

b) **Less than Significant Impact.** The City of Taft Police Department provides police protection services to the City of Taft.[22] The Taft Police Department's personnel consists of the Police Chief, Lieutenant, 3 Sergeants, and 9 Patrol Officers. In addition, there are 5 Dispatchers, 2 Community Service Officers, an Animal Control Officer, a Code Enforcement Officer, an Administrative Assistant to the Chief of Police, 2 Reserve Officers and 2 Volunteers. These personnel provide full-time, 24-hour police coverage with a full-time dispatch center. The Project would occur on one parcel and the property will have a security fence around it to secure the facility. No other increased demands for security would occur as a result of the proposed Project. The Project would not result in increased demand for police services and subsequently not result in the provision of new or expanded police facilities. Therefore, there would be a less than significant impact related to police protection services.

c) **No impact.** The Project site is served by the Taft City School District and Taft Union High School District.[23] The proposed Project includes the construction of a solar PV energy generation and storage facility on a vacant parcel. The proposed Project would not directly impact area schools, nor would it result in the demand for additional schools as there would be no increase of population. The Project would not require the construction or expansion of schools or education related facilities. There would be no impact to schools as a result of the proposed Project.

d) **No impact.** The West Side Recreation and Park District serves the City of Taft.[24] The proposed Project includes the construction of a solar PV energy generation and storage facility on a vacant parcel. The proposed Project would not directly impact existing parks, nor would it result in the demand for additional parks as there would be no increase of population. There would be no impact to parks.

e) **No impact.** The proposed Project would not impact any other public facilities.

XVI. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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?				X

a) **No Impact.** The West Side Recreation and Park District serves the City of Taft. [25] The proposed Project includes the construction of a solar PV energy generation and storage facility on a vacant parcel. The proposed Project would not directly impact existing parks, nor would it result in the demand for additional parks as there would be no increase of population. Therefore, the Project would not result in the increased deterioration of a recreational facility. Therefore, there would be no impact.

b) **No Impact.** The Project does not include any recreational facilities or require the construction of new facilities and there would not be an adverse physical effect to the environment. Therefore, there would be no impact.

XVII. Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	

A *Traffic Study* was prepared for the proposed Project by KOA, which is dated November 10, 2019, and is included as Appendix G. The information in this section of the Initial Study related to transportation is based on the analysis provided in the *Traffic Study*.

a) **Less than Significant Impact.** The Project *Traffic Study* concludes that, once constructed, the Project will not require a regular daily workforce. Maintenance and operations workforce would not generate a significant number of trips that would create impacts on the local transportation network or otherwise substantially affect levels of service in the area. As a result, operations-period trip generation was not analyzed further in the *Traffic Study*. Operations-related impacts will not occur.

The *Traffic Stud*y indicates that Project construction activities would generate additional vehicle trips in the immediate area, based on necessary truck hauling/delivery trips and the construction employee population. As such, the *Traffic Study* quantitatively assesses Project construction-period impacts on roadway segments in the vicinity of the Project site. The following are the study roadway segments that were included in the Traffic Study:

1. Ash Street between SR-119 and Airport Road
2. Airport Road between Ash Street and SR-119
3. SR-119 North, north of Cedar Street
4. SR-119 between Gardner Field Road and Airport Road

KOA analyzed the trip distribution, trip assignment, and daily roadway volumes for the designated study area. The analysis is based on the impacts of Project traffic during the peak of construction activity. Project construction would be completed in 2021. This year was defined as the future analysis year.

Existing Conditions

Ash Street is adjacent to the Project site and is a two-lane paved roadway with a striped centerline west of the intersection with Airport Road and is unstriped east of that intersection. There is no posted speed limit. There are soft shoulders with no curbs. Ash Street intersects with State Route 119 approximately 0.9 miles west of the project site. Airport Road is a two-lane paved roadway with a striped centerline that intersects with Ash Street adjacent to the Project site. This roadway intersects with State Route 119 at its southwestern terminus. State Route 119 (SR-

119) is a north-south roadway that provides access to Ash Street and Airport Road from major freeway interchanges including I-5 and SR-99.

Project Trip Generation

Project trip generation calculations included construction truck trip estimates and construction employee vehicle trips. The trip generation totals were determined based on the period which would generate the highest number of combined trips for the Project. Truck volumes were multiplied by a Passenger Car Equivalency (PCE) factor of 2.5 to estimate the real effect of total Project traffic, consistent with truck studies in the Southern California area. Although some carpooling would likely occur during Project construction, trip generation calculations conservatively assumed that each employee would commute in a single personal vehicle. To provide a conservative analysis, the total number of trips analyzed represents the highest trips generated by both construction employees and trucks.

The total daily Project trips defined by Table 16 (Project Construction Weekday Trip Generation) represent one-way inbound and outbound trips by both the construction personnel vehicles and construction trucks. The construction daily trip numbers are based on these peak construction input numbers:

- 4 daily peak-period truck round trips
- 50 construction employees on-site

The truck trip totals assumed up to two (semi type) trucks would arrive at the project site each day during construction. Each truck was assumed to make two round trips per day, so the four daily truck trips are round trips. Those trips were then multiplied by the PCE factor, resulting in a total of 10 trips.

Table 16
Project Construction Weekday Trip Generation

TRIP GENERATION	AVERAGE DAILY PCE TRIPS		
	Trucks*	Employee	Total
Field Personnel	0	100	100
Construction Truck	10	0	10
TOTAL TRIPS	**10**	**100**	**110**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

During the peak period of construction, the Project site is estimated to generate a weekday daily total of 110 passenger car-equivalent trips. This total daily number of trips is included in the analysis of the daily capacity of the affected roads while also accounting for existing traffic volumes. Peak-hour trips related to construction (i.e., during the morning and evening period when workers would be arriving and departing the site) were not considered because there is no discernable peak traffic period in the vicinity of the Project site.

Project Trip Distribution

Construction employee and truck vehicle trip patterns were based on the local roadway network that would provide primary access to the project site. Ash Street has a full-access intersection with the SR-119 highway to the west of the Project site. Project construction-period traffic would use Ash Street and Airport Road to access the regional highway network. The analyzed roadway segments were therefore along Ash Street and Airport Road as well as portions of SR-119 north of Cedar Street and south of Airport Road. All of these are two-lane roadways. The Project-

generated trips were assumed to travel across all of the analyzed study roadway segments, with full volumes applied to each route to be conservative and to provide flexibility for final trip routes.

Roadway Impact Analysis

As both existing and future projected volumes at the analyzed roadway segments are very low and do not approach the capacities of the roadways, this analysis focuses on daily volumes. The tables below provide a comparison of the analyzed existing and future volumes with and without the Project, for the study roadway segments. Comparisons to the total roadway capacity are provided, based on the lane configuration of the roadways, and daily volume capacities generally defined by the Highway Capacity Manual that are 10,000 vehicles per lane for major roadways. Table 17 (Project Study Roadway Segment Existing Volumes Analysis) provides a Project volume analysis based on the existing period analysis, included here based on CEQA precedents that project impact analyses should include an impact scenario that excludes future estimated traffic growth.

Table 17
Project Study Roadway Segment Existing Volumes Analysis

Roadway Segment	Existing Daily Volumes	Daily Construction Trips	Existing with Construction	% Increase	Roadway Capacity
Ash Street (between SR-119 and Airport Rd)	194	55	249	28%	10,000
Airport Road (bweteen Ash Street and SR-119)	360	55	415	15%	10,000
SR-119 North (north of Cedar Street)	8,028	55	8,083	1%	20,000
Taft Hwy/ SR-119 (between Gardner Field Rd and Airport Rd)	7,129	55	7,184	1%	20,000

Table 18 (Project Study Roadway Segment Future Volumes Analysis) provides a Project volume analysis at the roadway segments based on a future volume analysis. Future year-2021 volumes were defined by multiplying the existing year-2019 volumes by an ambient growth rate of two percent per year.

Table 18
Project Study Roadway Segment Future Volumes Analysis

Roadway Segment	Future 2021 without Construction	Daily Construction Trips	Future 2021 with Construction	% Increase	Roadway Capacity
Ash Street (between SR-119 and Airport Rd)	202	55	257	27%	10,000
Airport Road (bweteen Ash Street and SR-119)	375	55	430	15%	10,000
SR-119 North (north of Cedar Street)	8,352	55	8,407	1%	20,000
Taft Hwy/ SR-119 (between Gardner Field Rd and Airport Rd)	7,417	55	7,472	1%	20,000

For the remainder of the construction period, construction traffic volumes would decline from the peak levels analyzed in these tables. The roadway capacities of the roadway segments range from 10,000 to 20,000 vehicles per day. The roadway segments analyzed here would be operating in the range of 257 to 8,407 total vehicles per day based on the construction period numbers in Table 17 and Table 18. On all of the roadway study segments, adequate capacity would remain during the construction period. At least half of the roadway capacity would remain. During the other non-peak months of the overall construction schedule, traffic volumes would decline from these peak levels. The proposed Project would not create any significant impacts at the analyzed locations. Impacts will be less than significant.

b) **No Impact.** CEQA Guidelines Section 15064.3 subdivision (b) has been included in the 2018 CEQA Guidelines as part of the implementation of SB 743 which requires local jurisdictions to use Vehicle Miles Travelled (VMT) instead of Level of Service (LOS) methodologies for the purpose of determining the significance of traffic impacts under CEQA. However, as part of the implementation of SB 743 local jurisdictions are given until July 1, 2020 to develop and implement thresholds of significance criteria and methodologies for evaluating VMT under the new SB 743 requirements. The City of Taft has not at this time developed and implemented thresholds of significance for VMT. Moreover, VMT metrics are not an appropriate measurement of project construction activity. VMT data focuses on trip type, automobile use, transit use, walking and bicycling, and general auto trip reduction qualities of development and the management of travel to and from development sites. As project construction activities involve necessary travel to and from the site by construction employees and the necessary use of construction truck delivery and hauling operations, VMT is not an appropriate analysis tool and has been excluded from this analysis. As discussed in Section XVII(a) above, the contribution to traffic due to this Project would be minimal. Therefore, impacts with respect to CEQA Guidelines Section 15064.3(b) would not occur.

c) **Less than Significant Impact.** The operation of the Project would occur within one parcel and would not impact surrounding roads or create dangerous curves or intersections. During construction, routine road closures or one-way traffic may be required. However, the proposed Project would comply will all local regulations regarding temporary road closures or and/or one-way traffic controls. Therefore, impacts would be less than significant.

d) **Less than Significant Impact.** The operations of the proposed Project would not result in inadequate emergency access. If road closures and/or one way traffic controls are required during construction, the Project would comply with all requirements of the City of Taft and Kern County Fire Department. Impacts would be less than significant.

XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Cultural Native American tribe, and that is:				
a) 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				X
b) 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.				X

California Assembly Bill (AB) 52, through its implementing regulations, requires that lead agencies consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the Proposed Project and who have requested in writing to be informed by the lead agency of proposed projects in the tribe's geographic area (PRC Section 21080.3.1(b) and (d)). Pursuant to AB 52, the City of Taft as the CEQA Lead Agency sent AB 52 consultation notification letters via certified mail on May 8, 2020 to thirteen Native American groups affiliated with the Project's geographic area. The letters included a description of the Proposed Project and provided the Project location. In an email dated May 12, 2020, Jair Avila, Tribal Historic and Cultural Preservation Officer with the Fernandeño Tataviam Band of Missions Indians' Tribal Historic Preservation Office, deferred consultation for the Project to members of the Tejon Indian Tribe. No formal response was received from the Tejon Indian Tribe and no consultation was requested. In an email dated May 14, 2020, Alexandra McCleary, Tribal Archaeologist with the San Manuel Band of Missions Indians' Cultural Resources Management Department, noted that the Project is outside the Serrano ancestral territory. As such, the San Manuel Band of Mission Indians did not request to receive consulting party status with the City or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates. Therefore, no formal Tribal consultation was requested by any Native American Tribe during the AB 52 consultation period.

a) **No Impact**. No tribal cultural resources were identified as a result of consultation with local Native American Tribes. Therefore, no tribal cultural resources listed in or eligible for listing in the California Register, or on a local register of historic resources as defined in PRC Section 5020.a(k) would be impacted by the Project and no mitigation is required. No impact would occur.

b) **No impact**. No tribal cultural resources were identified as a result of the consultation with the Fernandeño Tataviam or San Manuel Bands of Missions Indians. Therefore, no tribal cultural resources that have been 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 PRC Section 5024.1, would be impacted by the Project and no mitigation is required. No impact would occur.

XIX. Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

a) **Less than significant impact.** The Project would require water, wastewater collection and treatment, storm water drainage, electrical power, natural gas, and telecommunication facilities. An analysis of impacts is provided below.

Water

Operation of the proposed solar PV energy generation and storage facility would not require the provision of any municipal water supplies. As the Project does not include the construction of dwelling units, no Water Supply Assessment (WSA) is required.[26] Water use within the City includes domestic, commercial, industrial and landscape irrigation. Most connections within the City's service area, including landscaped areas and City parks, are metered. Based on the fact that the proposed Project will not require municipal water supply during operation, it can be assumed that water demand from the development will not exceed the City's annual water demand and would not require the relocation or construction of new or expanded water supply facilities. Therefore, impacts will be less than significant.

Wastewater

The local wastewater treatment system is designed to comply with federal regulations (National Pollution Discharge Elimination System, NPDES) administered by the RWRCB. Moreover, the proposed Project is anticipated to generate

nominal wastewater during normal operations and periodic maintenance activities. Therefore, the proposed Project would not result of new or expanded wastewater treatment facilities. Therefore, the Project would have a less than significant impact.

Stormwater

At Project completion the site would be comprised of mostly pervious surfaces with nominal new impervious surfaces. Stormwater would either be absorbed into pervious surfaces or would travel as sheet flow off the impervious surfaces and onto the pervious surfaces where it would be absorbed. Post-Project runoff from the site would equal pre-project runoff. Therefore, the proposed Project would have a less than significant impact on stormwater facilities.

Electric Power

The Project represents a renewable energy project and would contribute more energy to the electrical system than it uses. Although the Project would require new electrical line tie ins for service, it would not result in the need for new electrical substations or electrical generating facilities. Additionally, associated equipment and appurtenances would use a minimal amount of electricity during operation. Therefore, the Project would have a less than significant impact.

Natural Gas

The Project would not require new natural gas services connections, and would not result in the need for new natural gas supplies or infrastructure. Therefore, the Project would have no impact with regard to natural gas.

Telecommunication Facilities

The proposed Project would not require telecommunication services. Therefore, the Project would have no impact.

For the above reasons, the Project is not anticipated to require relocation or construction of new or expanded water, wastewater treatment, storm drainage, electric power, natural gas, or telecommunications facilities.

b) **Less than Significant Impact.** The proposed Project is a solar PV energy generation and storage facility and does not require the provision of water supplies during operation other than for sporadic cleaning and maintenance operations. The Project would not increase demand for water in the region. Therefore, the proposed Project would have a less than significant impact as sufficient water supplies are available to serve the Project during normal, dry, and multiple dry years.

c) **No Impact.** The Project, a solar PV energy generation and storage facility, is not anticipated to result in a substantial increase the amount of wastewater because wastewater would not be a byproduct of the proposed operations. No impact would occur.

d) **Less than Significant Impact.** Construction of the proposed solar PV energy generation and storage facility is anticipated to result in the production of some solid waste. Project operations are not expected to produce substantial amounts of solid waste. Overall, the amount of solid waste produced, as a result of this Project is negligible compared to the daily waste produced in the City of Taft. The proposed Project would not require any regularly employed staff. The only operations at the facility would be sporadic inspections and maintenance visits, and would generate negligible amounts of solid waste during operation. Therefore, because the proposed Project is not expected to generate a substantial quantity of solid waste, the impact would be less than significant.

e) **No Impact.** The proposed Project would be required to comply with all applicable federal, state, County, and City statutes and regulations related to solid waste as a standard Project condition of approval. Therefore, no impact would occur.

XX. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

a) **No Impact.** According to the Taft General Plan, in recent years there have been numerous urban and wildland fires within Kern County and vicinity. In Kern County, forest and grass fires are the main types of wildland fires of concern. There have been 22 federal fire-related declarations for wildfire within Kern County between 1955 and 2011, with 11 occurring since 2005. However, the major fires have been in the Sierra Nevada Mountains, extending from the Kern River Canyon to the Lake Isabella region, which is over 37 miles to the northeast of the Project site. The Project site is designated as being in an area of moderate fire hazard severity. The Project Site is not located within or near any State Responsibility Areas or other wildland areas; however, the site is located in a Local Responsibility Area, which is land on which neither the state nor the federal government has any legal responsibility for providing fire protection.[27] The Project does not propose any residential uses and would not include any on-site employees during operation. Therefore, the Project would not impair an adopted emergency response plan or emergency evacuation plan. No impact would occur.

b) **No Impact.** The Project Site is not located within or near any State Responsibility Areas or very high fire hazard severity zones. A State Responsibility Area is an area where the State of California has primary financial responsibility for prevention and suppression of wildfires. State Responsibility Areas do not include lands within city boundaries or in federal ownership. The nearest such area is approximately 1.6 miles northwest of the Project site. The Project site is relatively flat with no noticeable slopes in the Project vicinity. The Project will not include any on-site employees during operation and does not propose residential uses on-site. Impacts related to exacerbation of wildfire due to slope, prevailing winds, or other factors would not occur.

c) **No Impact.** The Project Site is not located within or near any State Responsibility Areas or very high fire hazard severity zones. The nearest such area is several miles from the Project site. The Project does not require the installation of roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

d) **No Impact.** The Project site is located in a mostly undeveloped area of the City. The Project Site is not located within or near any State Responsibility Areas or very high fire hazard severity zones. The nearest such area is several miles from the Project site. The Project will not include any on-site employees during operation and does not propose residential uses on-site. Therefore, the Project will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially 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?		X		
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)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

a) **Less than Significant with Mitigation Incorporated**. The proposed Project would not substantially impact 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. Adverse impacts to biological resources would not occur. Mitigation Measures BIO-1 through BIO-10 would be implemented to ensure impacts to fish and wildlife species, plant and animal communities, and rare or endangered plants animals would not occur. Adverse impacts to historic resources would not occur. Mitigation Measure CUL-1 and Mitigation Measures GEO-1 through GEO-4 would be implemented in the event any important archaeological resources, paleontological resources, tribal cultural resources, or human remains are discovered during ground disturbing activities. This site is not known to have any association with an important example of California's history or prehistory. The environmental analysis provided in Section III concludes that impacts related to emissions of criteria pollutants and other air quality impacts would be less than significant. Sections pertaining to impacts related to climate change and hydrology and water quality would be less than significant. Based on the preceding analysis of potential impacts, no evidence is presented that this Project would degrade the quality of the environment. The City of Taft finds that impacts related to degradation of the environment would be less than significant with mitigation incorporated.

b) **Less than Significant with Mitigation Incorporated.** Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation

network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes and operational characteristics involved with the Project.

Section 15130(b)(1) of the CEQA Guidelines identifies two methods to determine the scope of related projects for cumulative impact analysis:

List-of-Projects Method: a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency. The proposed Project is currently the only project of its type being considered in the area. There are a number of development projects currently being considered by the Lead Agency. Construction of these projects would occur at different times and sites far enough removed from each other that construction related cumulative effects such as fugitive dust and construction noise would be less than significant. Development would adhere to applicable rules and regulations related to dust suppression, traffic control, storm water control, handling/storage of hazardous materials, and regulations related to protections for plants/animals/waters of the State and U.S. Cumulative impacts in these areas are also considered less than significant. The only operational vehicle trips associated with the proposed Project would be the infrequent inspection/cleaning/maintenance trips, which would result in an insignificant cumulative increase on area roadways separated in time and distance. Cumulative noise and air quality effects from these projects would also be less-than-significant due to their minimal contribution. Therefore, these projects are not expected to create impacts that are individually limited, but cumulatively considerable.

Summary-of-Projections Method: a summary of projections contained in an adopted general plan or related planning document or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

<u>Non-Cumulative Impacts</u>
Impacts related to aesthetics, air quality, population and housing, public services, recreation, transportation, and utilities have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Therefore, no cumulative impacts related to these topics would occur.

Impacts related to biological resources, cultural/tribal cultural resources, and hazards were found to be potentially significant and require mitigation to reduce to less than significant levels; therefore, the Project could contribute considerably to significant regional cumulative impacts in these topical areas. These topics are discussed in detail below.

Biological Resources. The context for assessing cumulative impacts to biological resources is the Project site and vicinity that includes other non-developed properties. Mitigation Measures BIO-1 through BIO-10 have been incorporated to ensure impacts to fish and wildlife species, plant and animal communities, and rare or endangered plants animals would not occur. Therefore, the Project would have no contribution to a cumulative loss of important biological resources in the region.

Cultural/Tribal Cultural Resources. The context for assessing cumulative impacts to local archeological and paleontological knowledge of our past is the resources in the Project site and vicinity that includes other non-developed properties. Loss of on-site or nearby archaeological and paleontological resources could reduce or eliminate important information relevant to the San Joaquin Valley and the State of California. Mitigation Measure CUL-1 and Mitigation Measures GEO-1 through GEO-4 have been incorporated requiring evaluation of any discovered potential archaeological resources, paleontological resources or human remains, the uniqueness of the archaeological or paleontological sample or ancestry of the remains, and appropriate steps to preserve or curate

the artifact or remains. This would eliminate any potential loss of important regional archaeological and paleontological information that may be buried under the project site; therefore, the Project would have no contribution to a cumulative loss of important regional archaeological or paleontological knowledge.

Hazards and Hazardous Materials. The context for assessing cumulative hazards impacts is the Project site and vicinity that includes other non-developed properties. Mitigation Measure HAZ-1 has been incorporated requiring the Project to dedicate an Avigation Easement to Taft-Kern County Airport prior to issuance of construction permits. These measures would eliminate potentially significant impacts associated with nearby flights associated with the airport. Therefore, the Project would have no contribution to a cumulative hazards impact in the region.

Global Impacts

One topic of global concern is climate change. As discussed in the greenhouse gas section of this document, climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. The Project would not contribute considerably to global climate change.

Based on the above analysis concerning the local, regional, and global impacts of the Project in consideration of past, current, and future projects, the City of Taft hereby finds that the contribution of the proposed Project to cumulative impacts would be less than significant with mitigation incorporated.

c) **Less than Significant Impact.** Based on the analysis of the Project's impacts in the responses to the environmental topics previously discussed, there is no indication that this Project would result in substantial adverse effects on human beings. While there would be a variety of temporary effects during construction related to noise, these would be less than significant. Long-term effects include a slight increase in vehicular traffic and traffic related noise, use of hazardous materials, emissions of criteria pollutants and greenhouse gas emissions. Generally, environmental effects would result in less than significant impacts. Based on the analysis in this Initial Study/Mitigated Negative Declaration, the City of Taft finds that direct and indirect impacts to human beings would be less than significant.

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Gas Company Road Solar Project

Air Quality & Greenhouse Gas Assessment

Taft, California

Prepared For:

ZGlobal
750 West Main Street
El Centro, California 92243

October 2019

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, and construction monitoring and reporting.

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Attachment A – CalEEMod Output File
Attachment B – Project Fossil Fuel Emissions Displacement

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
BAU	business-as-usual
BESS	Battery Energy Storage System
BPS	Best Performance Standards
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CTG	Control Techniques Guidance
DOE	Department of Energy
DPM	diesel particulate matter
EO	Executive Order
GHG	greenhouse gas

LIST OF ACRONYMS AND ABBREVIATIONS

IPCC	Intergovernmental Panel on Climate Change
LOS	levels of service
mph	miles per hour
$MTCO_2e$/year	metric tons of CO_2e per year
MW	Megawatt
MWh	Megawatt hour
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NOx	nitrous oxides
N_2O	nitrous oxide
O_3	ozone
$PM_{2.5}$	fine particulate matter
PM_{10}	coarse particulate matter
PV	Photovoltaic
Project	Gas Company Road Solar Project
RACT	Reasonably Available Control Technology
ROGs	reactive organic gases
SB	Senate Bill
SJVAB	San Joaquin Valley Air Basin
SJVAQMD	San Joaquin Valley Air Quality Management District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SIP	State Implementation Plan
SO_2	sulfur dioxide
TACs	toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WRCC	Western Regional Climate Center

1.0 INTRODUCTION

This report documents the results of an assessment of both air quality and greenhouse gases (GHG) completed for the Gas Company Road Solar Project (Project), which includes the construction of eight-Megawatt (MW)/24 Megawatt-hour (MWh) Photovoltaic (PV) and Battery Energy Storage System (BESS) system located in Taft, California. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the San Joaquin Valley Air Pollution Control District (SJVAPCD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Description and Location

The Project site is located in the City of Taft in southwest Kern County (see Figure 1). The Project site is an approximately 60-acre site located south of the East Cedar Street/Airport Road intersection. The irregular-shaped site is generally bound by undeveloped land and Gas Company Road to the north and east, a wastewater treatment plant to the south, and Airport Road and industrial uses to the west (see Figure 2). The Project site is currently characterized by flat and undeveloped land.

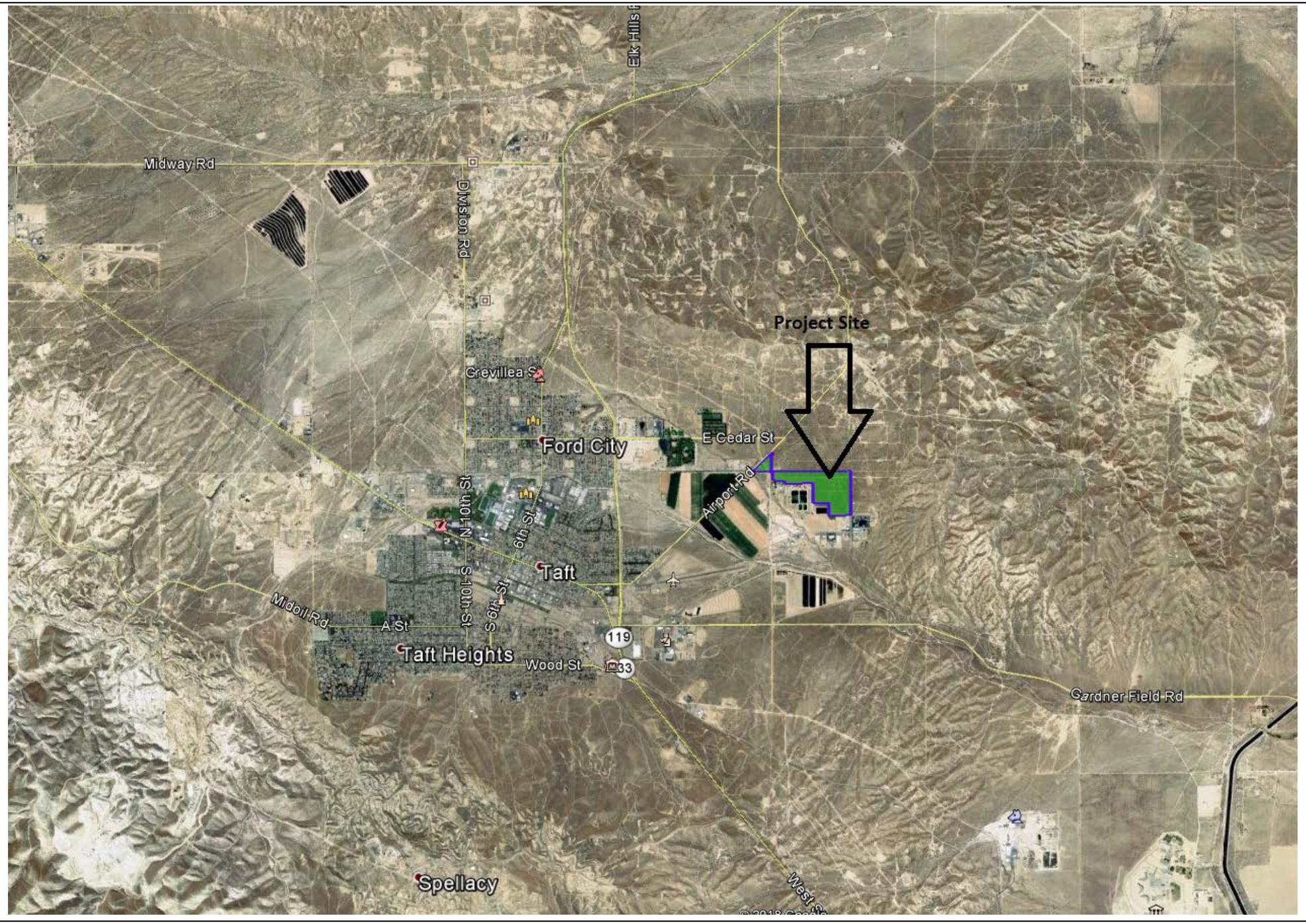
The Project proposes to install a grid-tie PV system on a tracker ground-mounted racking system spanning the 60-acre site. The major components of the PV system consist of PV modules, inverters, and array single-axis trackers.

The majority of the Project site has a City of Taft General Plan designation of Low-Density Residential with a small portion of the most western part of the site, Assessor Parcel Number 220-300-14-00, being designated as Commercial. The Low-Density Residential designation is intended to allow for low-density residential neighborhoods consisting of detached or attached units and permitted secondary dwelling units. Land designated as commercial is intended to provide for local and regional shopping centers, highway commercial land uses, general retail land uses, and office developments.

2.0 AIR QUALITY

2.1 Air Quality Setting

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that increase the potential for high levels of regional and local air pollutants. These factors are discussed below, along with the current regulatory structure that applies to the San Joaquin Valley Air Basin (SJVAB), which encompasses the Project site, pursuant to the regulatory authority of the SJVAPCD.



Map Date: 9/*26/2019*
Photo (or Base) Source: *Google Earth*

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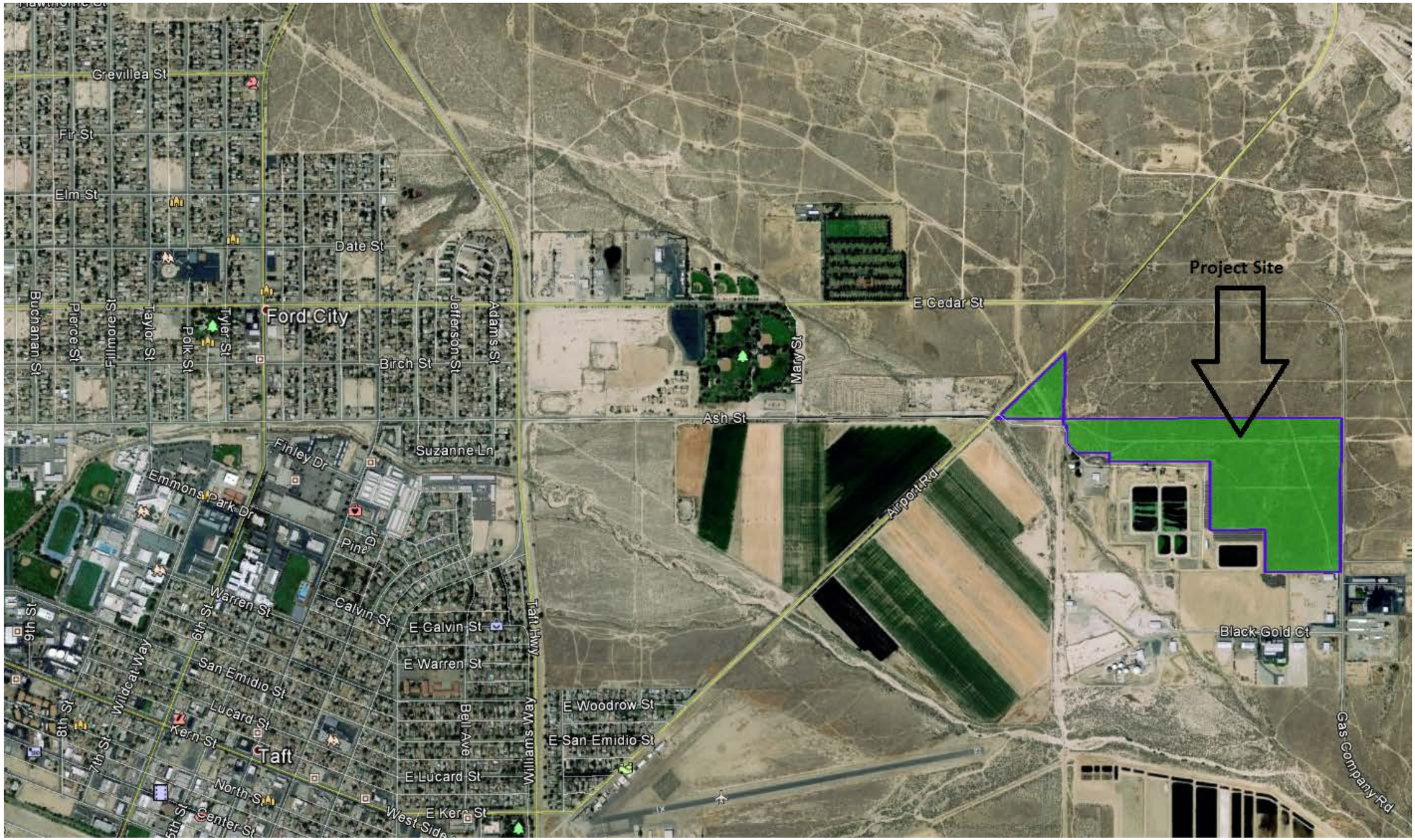
Figure 1. Project Vicinity

2019-192



Map Date: 9/*26/2019*
Photo (or Base) Source: *Google Earth*

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Figure 2. Project Location

2019-192

SJVAB

The SJVAB occupies the southern two-thirds of the Central Valley and includes a portion of Kern County. The SJVAB is mostly flat, less than 1,000 feet in elevation, and is surrounded on three sides by the Sierra Nevada, Tehachapi, and Coast Range mountains. This bowl-shaped feature forms a natural barrier to the dispersion (spreading over an area) of air pollutants. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (SJVAPCD 2002).

Climate and Meteorology

The climate in the SJVAB is strongly influenced by the presence of mountain ranges. The mountains create a partial rain shadow over the valley and block the free circulation of air, trapping stable air in the valley for extended periods. The climate is semi-arid and is characterized by long, hot, dry summers and cool, wet, foggy winters. Based on historical data obtained from the meteorological station located in Bakersfield, ambient temperatures range from an average minimum of 39 degrees Fahrenheit (˚F) in January to an average maximum of 98˚F in July. The average monthly precipitation is approximately 6.24 inches per year, with January and February averaging 1.35 inches. The average daily wind speed is 5.9 miles per hour (mph). The air flow patterns are characterized by one of four directions depending on the season. For example, during the summer, winds are predominantly northwestern (upvalley), while winters typically feature a prevailing stagnant condition that leads to high incidence of valley fog (Western Regional Climate Center [WRCC] 2014; California Air Resources Board [CARB] 1994).

Atmospheric Stability and Inversions

Stability describes the relative resistance of the atmosphere to vertical motion, which in turn mixes the air. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers while the upper layers remain cold. In contrast, an inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available for diluting air pollution near the ground. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions can be present in the morning but are often broken by daytime heating of the air layers near the ground. The deep, elevated inversions occur less frequently than the surface-based inversions but generally result in more severe air stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January. These naturally occurring conditions can make local air quality significantly worse than it would be without the inversions and the stagnation created by regional weather and topography.

2.1.1 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and State governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM

is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA) 2013

2.1.2 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.3 Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains over 60 monitoring stations throughout California. The Maricopa (755 Stanislaus Street, Maricopa) air quality monitoring station, located

approximately 6.3 miles south of the Project site, is the closest station to the site. The Maricopa monitoring station monitors ambient concentrations of O_3. Concentrations of $PM_{2.5}$ and PM_{10} were obtained from the Bakersfield-California Avenue air quality monitoring station (5558 California Avenue, Bakersfield) located approximately 25.1 miles northeast of the site. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the development area.

Table 2-2 summarizes the published data concerning O_3 since 2016 from the Maricopa monitoring station for each year that the monitoring data is provided. Table 2-2 also shows the published data concerning $PM_{2.5}$ and PM_{10} since 2016 from the Bakersfield-California Avenue monitoring station.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2016	2017	2018
O_3 (Hanford- South Irwin Street Air Quality Monitoring Station)			
Max 1-hour concentration (ppm)	0.092	0.117	0.098
Max 8-hour concentration (ppm) (State/federal)	0.087 / 0.087	0.094 / 0.093	0.093 / 0.092
Number of days above 1-hour standard (State/federal)	0 / 0	1 / 0	5 / 0
Number of days above 8-hour standard (State/federal)	55 / 50	42 / 38	46 / 42
PM_{10} (Corcoran-Patterson Avenue Air Quality Monitoring Station)			
Max 24-hour concentration (µg/m^3) (State/federal)	92.2 / 90.9	143.6 / 138.0	142.0 / 92.2
Number of days above 24-hour standard (State/federal)	121.4 / 0	98.7 / 0	* / 0
$PM_{2.5}$ (Corcoran-Patterson Avenue Air Quality Monitoring Station)			
Max 24-hour concentration (µg/m^3) (state/federal)	66.4 / 66.4	101.8 / 101.8	98.5 / 98.5
Number of days above federal 24-hour standard	0	0	0

Source: CARB 2019a
µg/m^3 = micrograms per cubic meter; ppm = parts per million
** = Insufficient data available*

The U.S. Environmental Protection Agency (USEPA) and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the for the Kern County portion of the SJVAB is included in Table 2-3.

The determination of whether an area meets the State and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the State and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the State standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the State standards for O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2018).

Table 2-3. Attainment Status of Criteria Pollutants in the Kings County Portion of San Joaquin Valley Air Basin

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Unclassified/Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2018

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SJVAPCD for the criteria pollutants.

2.2.2 State

California CAA

The California CAA allows the State to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs within California, including setting the California ambient air quality standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California SIP

The federal CAA (and its subsequent amendments) requires each State to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register.

The SJVAPCD is the agency primarily responsible for ensuring that national and State ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the air district has completed the following air quality attainment plans and reports, which together constitute the SIP for the portion of the SJVAB encompassing the Project:

- **2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked One-Hour Ozone Standard.** The SJVAPCD initially adopted this plan in 2004 to address USEPA's one-hour O_3 standard. Although the USEPA approved the SJVAPCD's 2004 plan in 2010, the USEPA withdrew this approval as a result of a court ruling in November 2012. The SJVAPCD adopted a new plan for the USEPA's revoked one-hour O_3 standard in September 2013 (SJVAPCD 2013).
- **2016 Plan for the 2008 Eight-Hour Ozone Standard.** The Ozone Plan, approved in 2016, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the USEPA's standards. The plan calls for new

and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs (SJVAPCD 2016a).

- **2007 Ozone Plan**. The Ozone Plan, approved in 2007, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the USEPA's standards. The 2007 Ozone Plan calls for a 75-percent reduction of ozone-forming NO_x emissions (SJVAPCD 2007a). These NO_x reductions are preferred and essential to meeting the new eight-hour O_3 and $PM_{2.5}$ standards. The plan calls for new and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs.
- **2009 Reasonably Available Control Technology Demonstration for O_3 SIP**. The SJVAPCD adopted the Reasonably Available Control Technology (RACT) Demonstration for Ozone SIP in 2009. The CAA requires RACT for certain sources in all nonattainment areas. The SJVAPCD is required to ensure the USEPA's Control Techniques Guidance (CTG) is being implemented through SJVAPCD regulations. The 42 CTGs were developed to control major sources of emissions (SJVAPCD 2009).
- **2007 PM_{10} Maintenance Plan and Request for Redesignation.** In 2007, the SJVAPCD adopted the 2007 PM_{10} Attainment Plan to ensure the continued attainment of the USEPA's PM_{10} standard. Since the USEPA determined that the air basin had attained the federal PM_{10} standards on October 30, 2006, the valley is designated as an attainment area (SJVAPCD 2007b).
- **2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard**. In 2016, the SJVAPCD adopted the 2016 $PM_{2.5}$ Plan to address the USEPA's 24-hour standards. The plan utilizes the best available information to develop a strategy to demonstrate attainment of the federal standard for $PM_{2.5}$. A number of local strategies are included in the plan, including regulations to address stationary sources, use of a risk-based approach to prioritize measures to expedite attainment standards, incentive measures, technology advances, policy efforts to shape new legislation, and public outreach (SJVAPCD 2016b).

2.2.3 Local

San Joaquin Valley Air Pollution Control District

The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded in the SJVAB and that air quality conditions are maintained. SJVAPCD responsibilities include preparing plans for the attainment of ambient air quality standards, adopting and enforcing air pollution rules, issuing permits for and inspecting stationary air pollution sources, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing State and federal programs and regulations. The SJVAPCD has also adopted various rules and regulations for the control of

stationary and area sources of emissions. Provisions applicable to the proposed Project are summarized as follows:

- **Regulation II (Permits), Rule 2201, New and Modified Stationary Source Review Rule**. This rule provides for review of new and modified stationary sources of air pollution, with the aim of complying with State and federal ambient air quality standards.
- **Regulation IV (Prohibitions), Rule 4001, New Source Performance Standards**. This rule establishes standards, criteria, and operational/reporting requirements for all new sources of air pollution, as well as modifications of existing sources of air pollution.
- **Regulation IV (Visible Emissions), Rule 4101, Nuisance.** The purpose of this rule is to protect the health and safety of the public from source operations that emit or may emit air contaminants or other materials. It prohibits emissions of air contaminants or other materials "which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public."
- **Regulation IV (Visible Emissions), Rule 4601, Architectural Coatings.** The rule limits volatile organic compound (VOC) emissions from architectural coatings and specifies practices for proper storage, cleanup, and labeling requirements. Rule 4601 applies to "any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District." Materials covered by the rule include adhesives, architectural coatings, paints, varnishes, sealers, stains, concrete curing compounds, concrete/masonry sealers, and waterproofing sealers.
- **Regulation IV (Visible Emissions), Rule 4641, Cutback, Slow Curve and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt and maintenance operations and applies to the use of these materials. Specifically, certain types of asphalt cannot be used for penetrating prime coat, dust palliative, or other paving: rapid cure and medium cure cutback asphalt, slow cure asphalt that contains more than 0.5 percent of organic compound which evaporates at 500 ˚F or lower, and emulsified asphalt containing VOC in excess of three percent, which evaporates at 500 ˚F or lower.
- **Regulation VIII (Fugitive PM_{10} Prohibitions), Rules 8021–8071, Fugitive PM_{10} Prohibitions.** The purpose of these rules is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources.
- **Regulation IX (Mobile and Indirect Sources), Rule 9510, Indirect Source Review.** This rule is the result of State requirements outlined in California Health and Safety Code Section 40604 and the SIP. The air district's SIP commitments were originally contained in the SJVAPCD's 2003 PM_{10} Plan and Extreme Ozone Attainment Demonstration Plans, which presented the SJVAPCD's

strategy to reduce PM_{10} and NO_x in order to reach the ambient air pollution standards on schedule, which had been 2010. The plans quantify the reduction from current SJVAPCD rules and proposed rules, as well as State and federal regulations, and then model future emissions to determine whether the SJVAPCD may reach attainment for applicable pollutants.

This rule will reduce emissions of NO_x and PM_{10} from new development projects that attract or generate motor vehicle trips. In general, new development contributes to the air pollution problem in the SJVAB by increasing the number of vehicles and vehicle miles traveled. Although newer, cleaner technology is reducing per-vehicle pollution, the emissions increase from new development partially offsets emission reductions gained from technology advances. Indirect Source Review applies to larger development projects that have not yet gained discretionary approval. A discretionary permit is a permit from a public agency, which requires some amount of deliberation by that agency, including the potential to require modifications or conditions on the project. In accordance with this rule, developers of larger residential, commercial, and industrial projects are required to reduce smog-forming NO_x and PM_{10} emissions from their projects' baselines as follows (SJVAPCD 2005):

- 20 percent of construction NO_x exhaust,
- 45 percent of construction PM_{10} exhaust,
- 33 percent of operational NO_x over 10 years, and
- 50 percent of operational PM_{10} over 10 years.

These reductions are intended to be achieved through incorporation of onsite reduction measures. If, after implementation of onsite emissions reduction measures project emissions still exceed the minimum baseline reduction, the Indirect Source Review requires a project applicant to pay an offsite fee to the SJVAPCD, which is then used to fund clean-air projects within the air basin.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or State ambient air quality standard.

3) Expose sensitive receptors to substantial pollution concentrations.

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

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SJVAPCD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Kern County. Operational air pollutant emissions were based on the Project site plans.

Impact Analysis

Project Construction-Generated Criteria Air Quality Emissions

Construction Significance Analysis

Construction-generated emissions are temporary and short term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NO_X, PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, and NO_X emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced onsite as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

During construction activities, the Project would also be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). The purpose of this rule is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources. For instance, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. Regulation VIII specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.
- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 mph.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Do not overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Construction-generated ozone precursor emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum annual construction-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 2-4.

Table 2-4. Unmitigated Construction-Related Emissions						
Construction Year	**Maximum Pollutants (tons per year)**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Annual (Maximum Tons per Year)						
Construction in 2020	0.43	4.70	3.00	0.00	1.10	0.60
Construction in 2021	0.32	3.60	2.58	0.00	0.29	0.16
SJVAPCD Potentially Significant Impact Threshold	*10*	*10*	*100*	*27*	*15*	*15*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SJVAPCD Regulation VIII. The specific regulation applied in CalEEMod was reducing vehicle speeds on unpaved roads to under 15 mph.
Emissions account for 2,000 square foot energy storage system enclosures and the grading of 60 acres.

As shown in Table 2-4, construction-generated emissions would not exceed SJVAPCD significance thresholds.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the SJVAPCD's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. This rule applies to the following construction projects within the jurisdiction of the SJVAPCD:

- 50 residential units,
- 2,000 square feet of commercial space,
- 25,000 square feet of light industrial space,
- 100,000 square feet of heavy industrial space,
- 20,000 square feet of medical office space,
- 39,000 square feet of general office space,
- 9,000 square feet of educational space,
- 10,000 square feet of government space,
- 20,000 square feet of recreational space, or
- 9,000 square feet of space not identified above.

This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NO_x or two tons of PM_{10}.

Since the Project does not include the construction of a permanent building and is not a transportation project, the proposed Project would not be required to comply with this rule. Additionally, the Project is

proposing an eight MW solar energy generation facility. One of the obvious benefits of solar energy is that the production of electricity from these sources involves almost no direct emissions of criteria air pollutant emissions. In contrast, fossil fuel–fired electric generation from coal, oil, or natural gas results in substantial direct emissions that contribute to adverse impacts on the environment. For instance, electric generation from fossil fuel–fired power plants contributes 22 percent of all NO_x emissions in the U.S. according to the U.S. Department of Energy (DOE 2008). Renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact statewide.

Project Operations Criteria Air Quality Emissions

Operational Significance Analysis

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Although limited, implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use for routine maintenance work.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Operational-generated O_3 precursor emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum annual operational-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 2-5.

Table 2-5. Operational-Related Emissions						
Construction Year	**Maximum Pollutants (tons per year)**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Annual (Maximum Tons per Year)						
Area Source	0.22	0.00	0.00	0.00	0.00	0.00
Energy Use	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SJVAPCD Significance Threshold	*10*	*10*	*15*	*15*	*100*	*27*
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for one employee vehicle trip per day and the operation of a 2,000-square-foot energy storage system enclosures.

As indicated in Table 2-5, operational-generated emissions would not exceed SJVAPCD significance thresholds.

As previously mentioned, SJVAPCD Rule 9510 is intended to fulfill the District's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. Since the Project is not a typical development project involving permanent buildings or other stationary sources of emissions and is not a transportation project, the proposed Project would not be required to comply with this rule. Furthermore, as shown in Table 2-5, the Project would emit a very low level of operational pollutants. Although the Project does not need to comply with Rule 9510, it is important to note that one of the benefits of solar energy is that the production of electricity from these sources involves minimal worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. Renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact statewide. Therefore, NO_X and PM_{10} emissions would be minimal during operations.

Conflict with SJVAPCD Air Quality Attainment Plans

As part of its enforcement responsibilities, the USEPA requires each State with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the California CAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and State ambient air

quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously stated, the SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard, 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard, and 2007 PM_{10} Maintenance Plan and Request for Redesignation. These plans collectively address the air basin's nonattainment status with the national and State O_3 standards as well as PM by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving State (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.

The proposed Project is not proposing any new residential development, therefore there will be no increase in population as a result of the Project. The Project would not exceed the population or job growth projections used by the SJVAPCD to develop its air quality attainment plans.

Furthermore, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact to statewide air quality. The energy produced by the Project would displace the criteria pollutant emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal).

Table 2-6 shows the emissions that would be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric) (California Energy Commission [CEC] 2019). Displacement of fossil fuel emissions has a direct beneficial effect on human health for those receptors downwind of the location of the fossil fuel power plants.

Table 2-6. Proposed Project Displaced Criteria Pollutant Emissions (Tons)						
	Emissions (Tons)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Emissions Displaced Annually (tons)						
Displaced Natural Gas-Source Emissions	0.0	0.14	0.04	0.10	0.13	0.05
Displaced Coal-Source Emissions	0.0	1.35	0.06	0.06	0.01	0.01
Total	**0.0**	**1.49**	**0.10**	**0.16**	**0.14**	**0.06**
Emissions Displaced over 30 Years (tons)						
Displaced Natural Gas-Source Emissions	0.0	4.20	1.20	3.00	3.90	1.50
Displaced Coal-Source Emissions	0.0	40.50	1.80	1.80	0.30	0.30
Total	**0.0**	**44.70**	**3.00**	**5.40**	**4.20**	**1.80**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

Notes: In order to provide a conservative analysis, the Proposed Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually). A heat rate of 10,000 British Thermal Units (Btu) per kilowatt hour (kWH) is assumed. The heat content of coal is assumed at 24 million Btu per ton of coal burned. Eight MW (17,520,000 annual kWH) x 10,000 heat rate = 233,698,107,347 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (90.95 percent). Coal constitutes 8.61 percent of all fossil fuel-based energy. Therefore, 56,961 million of the displaced Btu is displaced natural gas consumption and 5,386 million of the displaced Btu is displaced coal. At a rate of 24 million Btu per ton of coal burned, the Project would displace 224.4 tons of burned coal annually.

As shown, the Project would potentially displace just under 45 tons of NO_x, three tons of CO, just over five tons of SO_2, just over four tons of PM_{10}, and almost two tons of $PM_{2.5}$ over the course of 30 years. Furthermore, as demonstrated in Table 2-5 and Table 2-6, the Project would not exceed the applicable SJVAPCD significance thresholds for construction or operational-source emissions.

The Project would be consistent with the emission-reduction goals of the SJVAPCD Attainment Plans.

Exposure of Sensitive Receptors to TACs

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. There are no sensitive receptors immediately adjacent to the Project site. The nearest sensitive receptor is a residence located approximately 0.40 mile to the northwest of the Project site.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading), soil hauling truck traffic, paving, and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted the maximum construction-related emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 2.02 pounds per day during construction activity in 2020 and 0.93 pound per day during construction activity in 2021 (see Attachment A) ($PM_{2.5}$ is considered a surrogate for DPM because more than 90 percent of DPM is less than one microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter [i.e., $PM_{2.5}$], according to CARB. Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., site preparation, grading, paving) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. 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 70-, 30-, or nine-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed Project. Consequently, an important consideration is the fact that construction of the proposed Project is anticipated to last approximately 17 months. Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the relatively short duration of construction activities required to develop the site, the highly dispersive properties of DPM, and the lack of nearby sensitive receptors, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally occurring asbestos-containing soils. The proposed Project is not located within an area designated by the State of California as likely to contain

naturally occurring asbestos (Department of Conservation [DOC] 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The CI fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever is found in California, including Kern County. In about 50 to 75 percent of people, Valley Fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

The California Department of Public Health (CDPH 2016) considers Kern County a highly endemic area for Valley Fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get Valley Fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for Valley Fever occurs during the driest months in California, between June and November. Infection from Valley Fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity.

With minimal site grading and conformance with SJAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers.

Operational Air Contaminants

The proposed Project involves the construction of a solar energy generation facility. The proposed Project will not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable air toxic emissions from Project operations.

CO Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service (LOS) during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations across the state have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the SCAQMD *1992 Federal Attainment Plan for Carbon Monoxide* (1992 CO Plan) in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

The Project would require minimal maintenance and would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have

sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Construction

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, under CEQA, construction odors would result in a less than significant impact related to odor emissions.

Operations

CARB's *Air Quality and Land Use Handbook* (2005) identifies the sources of the most common operational odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The Project does not contain any of the land uses identified as typically associated with emissions of objectionable odors. As such, a less-than-significant impact would occur.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This

phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (IPCC 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (Intergovernmental Panel on Climate Change [IPCC] 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases	
Greenhouse Gas	**Description**
CO_2	CO_2 is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	CH_4 is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1] USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2019b).

Emissions of CO_2 are by-products of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

3.2 Regulatory Framework

3.2.1 State

Executive Order (EO) S-3-05

EO S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this EO remains relevant because a more recent California Appellate Court decision, Cleveland National Forest Foundation v. San Diego Association of Governments (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining to adopt the 2050 goal as a measure of significance in light of the fact that the EO does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40-percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions 80 percent below 1990 levels by the year 2050."

Assembly Bill (AB) 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code §38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible State implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by Senate Bill (SB) 32

as discussed below and establishes a proposed framework of action for California to meet a 40-percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include: increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of CH_4 emissions from agricultural and other wastes.

EO B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

SB 32 and AB 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

SB X1-2 of 2011, SB 350 of 2015, and SB 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60-percent renewable procurement by 2030 and 100 percent by 2045 RPS.

3.2.2 Local

SJVAPCD

The SJVAPCD provides a tiered approach in assessing significance of project-specific GHG emission increases. Projects implementing Best Performance Standards (BPS) would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29-percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact. The BAU approach was developed consistent with the GHG emission reduction targets established in the Scoping Plan. However, the BAU portion of the tiered approach is problematic based on the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife* (referred to as the Newhall Ranch decision hereafter). Therefore, it is recommended that emission thresholds of significance developed by Sacramento Metropolitan Air Quality Management District (SMAQMD) be used for evaluating construction- and operation-related GHG emissions.

City of Taft Climate Action Plan (CAP)

The CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city of Taft, consistent with the CEQA Guidelines and the SJVAPCD. The CAP identifies an overall strategy, including reduction measures and implementation actions, which the City will use to achieve the State-recommended GHG emission reduction targets for 2020, 2030, and 2050.

In order to achieve 15-percent reduction by 2020, the City has implemented 49 measures that are a mixture of actions to encourage, incentivize, and mandate implementation. There reductions will all be a part of an implementation and monitoring program regulated by the City's staff.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following the CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHG emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

As previously mentioned, the SJVAPCD provides a tiered approach in assessing significance of project-specific GHG emission increases. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29-percent reduction in GHG emissions, from BAU, is required to determine that a project would have a less than cumulatively significant impact. The BAU approach was developed consistent with the GHG emission reduction targets established in the Scoping Plan. However, the BAU portion of the tiered approach is problematic based on the California

Supreme Court decision in the Newhall Ranch decision. This California Supreme Court ruling confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method." A 29-percent reduction in GHG emissions from BAU (known as the BAU Threshold) is not supported by quantitative parameters.

The issue of setting a GHG threshold is complex and dynamic, especially in light of the Newhall Ranch decision. But the California Supreme Court ruling highlighted the need for the threshold to be tailored to the specific proposed development type, its location, and the surrounding setting. Therefore, the threshold used to analyze the Project is specific to the analysis herein and the lead agency (City of Taft) retains the ability to develop and/or use different thresholds of significance for other projects in its capacity as lead agency and recognizing the need for the individual threshold to be tailored and specific to individual projects.

It is recommended that mass emission thresholds of significance developed by SMAQMD be used for evaluating construction- and operation-related GHG emissions. The SMAQMD administers air emissions in the Sacramento Valley Air Basin, which is located in the Great Central Valley similar to the SJVAB. Thus, the geographic features influencing air emissions in the SJVAB are the same as those influencing the Sacramento Valley Air Basin. These thresholds are available in the SMAQMD CEQA Guide, last updated in February 2016 (SMAQMD 2016).

The SMAQMD recommends a two-tiered approach for assessing a project's operational emissions. The two-tier framework is recommended by all air districts in the Sacramento region and is retained in this analysis. SMAQMD's first-tier threshold was directly derived from the statewide year 2020 reduction targets established by AB 32, were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provides guidance to CEQA practitioners with regard to determining whether GHG emissions from a proposed project are significant.

The first tier consists of comparing a project's annual operational emissions to SMAQMD's recommended mass emission threshold. The first tier gives lead agencies the ability to assess smaller projects and conclude that each development proposal would not necessarily make a considerable contribution to the cumulative impact of climate change. The second tier consists of evaluating a project's consistency with California's GHG reduction targets. In light of the Newhall Ranch decision, the second-tier threshold is no longer applicable.

Based on the discussion above, the following thresholds are applied to this analysis:

- For the evaluation of construction-related emissions, if the mass emissions associated with construction of the Project would exceed of 1,100 metric tons of CO_2e per year ($MTCO_2e$/year) then they would be cumulatively considerable.
- For the evaluation of operational emissions, such would not have a significant impact on the environment if they are less than 1,100 $MTCO_2e$/year.

3.4 Methodology

Where quantification was required, GHG emissions were modeled using the CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were calculated using CalEEMod model defaults for Kern County. Operational GHG emissions were based on the Project site plans.

3.4.1 Impact Analysis

Contribution of Greenhouse Gas Emissions

Construction

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Annual (Maximum Metric Tons per Year)	
Construction in 2020	576
Construction in 2021	707
Significance Threshold	*1,100*
Exceeds Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emissions account for 2,000-square-foot energy storage system enclosures and the grading of 60 acres.

As shown in Table 3-2, construction-generated emissions would not exceed the recommended significance threshold.

Operations

Operation of the Project would result in GHG emissions associated with minimal worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. Resultant emissions have been added to the operational totals identified in Table 3-3, which summarizes all the direct and indirect annual GHG emissions level associated with the Project.

Table 3-3. Operational Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Annual (Maximum Tons per Year)	
Area Source (landscaping, hearth)	0.00
Energy	0.00
Mobile	1.98
Waste	1.25
Water	0.02
Total	**3.25**
Significance Threshold	*1,100*
Exceeds Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.
Notes: Emission estimates account for 1 permanent employee trip daily, lighting the Project site, water usage for cleaning the PV modules and the operation of a 2,000 square foot energy storage system enclosures.

As shown in Table 3-3, operational-generated emissions would not exceed the recommended threshold of 1,100 metric tons of CO_2e per year.

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

GHG emissions generated by energy sources account for all stages of the life cycle (including mining, construction, etc.), which are referred to as the cumulative GHG emissions and are usually expressed in grams of CO_2e per unit of busbar electricity (i.e., gCO_2/kWh_e). When comparing various fossil-fueled energy generators, the GHG emissions generated are dependent on the type of fuel (i.e., gas, oil, coal). GHG emissions generated by some of the more common types of fossil-fueled plants and solar-power plants are summarized in Table 3-4.

Table 3-4. Life-Cycle Greenhouse Gas Emissions for Various Types of Energy Generators	
Fossil Fueled	
Coal	950 to 1,250
Oil	500 to 1,200
Gas	440 to 780
Solar	43 to 73[3]

Source: Weisser 2007
Notes:
[1] gCO_2e/kWh_e = grams of CO_2e per unit of busbar electricity.
[2] Emissions are based on lifecycle of energy source including mining, construction, operation, etc.
[3] Solar PV life-cycle emissions result from using fossil-fuel-based energy to produce the materials for solar cells, modules, and systems, as well as directly from smelting, production, and manufacturing facilities.

As shown in Table 3-4, solar plants generate far less GHG life-cycle emissions (approximately 83 to 94 percent less) than fossil-fueled energy plants. Therefore, the proposed Project would contribute to the continued reduction of GHG emissions in the interconnected California and western U.S. electricity systems, as the energy produced by the Project would displace GHG emissions that would otherwise be produced by existing BAU power generation resources (including natural gas, coal, arid renewable combustion resources). The Project would generate a maximum of eight MW of electricity at any one time. Table 3-5 shows the emissions that would be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric) (CEC 2019).

Table 3-5. Proposed Project Displaced GHG Emissions (Metric Tons)

	Emissions (Metric Tons)			
	CO_2	CH_4	N_2O	CO_2e
Emissions Displaced Annually (metric tons)				
Displaced Natural Gas-Source Emissions	2,506	0	0	2,506
Displaced Coal-Source Emissions	542	0	0	542
Total	**3,048**	**0**	**0**	**3,048**
Emissions Displaced over 30 Years (metric tons)				
Displaced Natural Gas-Source Emissions	75,180	0	0	75,180
Displaced Coal-Source Emissions	16,260	0	0	16,260
Total	**91,440**	**0**	**0**	**91,440**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

Notes: In order to provide a conservative analysis, the proposed Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually). A heat rate of 10,000 Btu per kWh is assumed. The heat content of coal is assumed at 24 million Btu per ton of coal burned. Eight megawatts (17,520,000 annual kWh) x 10,000 heat rate = 233,698,107,347 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (90.95 percent). Coal constitutes 8.61 percent of all fossil fuel-based energy. Therefore, 56,961 million of the displaced Btu is displaced natural gas consumption and 5,386 million of the displaced Btu is displaced coal. At a rate of 24 million Btu per ton of coal burned, the Project would displace 224.4 tons of burned coal annually.

As shown, the Project would potentially displace approximately 3,048 metric tons of CO_2e per year, and approximately 91,440 metric tons of CO_2e over the course of 30 years.

While the Project would emit some GHG emissions during construction and a very small amount during operations, the contribution of renewable resource energy production to meet the goals of the Renewable Portfolio Standard (AB 32 Scoping Plan Measure E-3) would result in a net cumulative reduction of GHG emissions, a key environmental benefit. (AB 32 Scoping Plan Measure E-3, Renewable Portfolio Standard, of the AB 32 Climate Change Scoping Plan requires that all investor-owned utility companies generate 33 percent of their energy demand from renewable sources.) Therefore, the short-term minor generation of GHG emissions during construction which is necessary to create this new, low-GHG-emitting power-generating facility, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

Increasing sources of solar energy is one of the measures identified under AB 32 to reduce statewide GHG emissions. The proposed Project would reduce GHG emissions in a manner consistent with AB 32 and other California GHG-reducing legislation by creating a new source of solar power to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use.

Additionally, the City's CAP includes strategies to reduce GHG emission and achieve set targets. The Project complies with GHG Reduction Measure RE-5, Renewable Energy Siting. This policy provision encourages the development of renewable energy projects within the City, as these projects can generate excess revenue for business owners that otherwise would have vacant land and the power generated can be part of a community-shared solar project.

The Project would not conflict with any applicable plan, policy, or regulation intended to reduce GHG emissions.

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ATTACHMENT A

CalEEMod Output Files

Gas Company Road Solar

Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	60.00	Acre	60.00	2,613,600.00	0
General Light Industry	2.00	1000sqft	0.00	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acerage update to match the project.

Construction Phase - Construction phases updated to match that of the project.

Trips and VMT - Trips updated to match that of the project.

Vehicle Trips - Assuming 1 trip per day.

Consumer Products - No emission factor for operational area.

Energy Use - Operational energy use from similar solar project.

Water And Wastewater - Outdoor water use found from similar project.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1,110.00	320.00
tblConstructionPhase	PhaseEndDate	11/5/2024	12/17/2021
tblConstructionPhase	PhaseEndDate	8/4/2020	9/25/2020
tblConstructionPhase	PhaseEndDate	3/3/2020	4/24/2020
tblConstructionPhase	PhaseStartDate	8/5/2020	9/26/2020
tblConstructionPhase	PhaseStartDate	3/4/2020	4/25/2020
tblConstructionPhase	PhaseStartDate	1/8/2020	3/1/2020
tblConsumerProducts	ROG_EF	2.14E-05	0
tblEnergyUse	LightingElect	2.70	0.01
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	1.0000e-003
tblEnergyUse	T24NG	17.03	0.00
tblLandUse	LotAcreage	0.05	0.00
tblTripsAndVMT	VendorTripNumber	429.00	100.00
tblTripsAndVMT	WorkerTripNumber	1,099.00	80.00
tblVehicleTrips	ST_TR	1.32	0.50
tblVehicleTrips	SU_TR	0.68	0.50
tblVehicleTrips	WD_TR	6.97	0.50
tblWater	IndoorWaterUseRate	462,500.00	0.00
tblWater	OutdoorWaterUseRate	0.00	23,200.00

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					
2020	0.4296	4.7046	2.9601	6.4400e-003	0.8954	0.2047	1.1001	0.4121	0.1892	0.6013	0.0000	572.5729	572.5729	0.1464	0.0000	576.2335
2021	0.3154	3.5944	2.5764	7.7700e-003	0.1647	0.1246	0.2892	0.0457	0.1172	0.1628	0.0000	704.5292	704.5292	0.0980	0.0000	706.9797
Maximum	**0.4296**	**4.7046**	**2.9601**	**7.7700e-003**	**0.8954**	**0.2047**	**1.1001**	**0.4121**	**0.1892**	**0.6013**	**0.0000**	**704.5292**	**704.5292**	**0.1464**	**0.0000**	**706.9797**

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					
2020	0.4296	4.7046	2.9601	6.4400e-003	0.8954	0.2047	1.1001	0.4121	0.1892	0.6013	0.0000	572.5723	572.5723	0.1464	0.0000	576.2329
2021	0.3154	3.5944	2.5764	7.7700e-003	0.1647	0.1246	0.2892	0.0457	0.1172	0.1628	0.0000	704.5288	704.5288	0.0980	0.0000	706.9793
Maximum	**0.4296**	**4.7046**	**2.9601**	**7.7700e-003**	**0.8954**	**0.2047**	**1.1001**	**0.4121**	**0.1892**	**0.6013**	**0.0000**	**704.5288**	**704.5288**	**0.1464**	**0.0000**	**706.9793**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	1-2-2020	4-1-2020	0.5328	0.5328
3	4-2-2020	7-1-2020	1.7134	1.7134
4	7-2-2020	10-1-2020	1.7563	1.7563
5	10-2-2020	1-1-2021	1.1314	1.1314
6	1-2-2021	4-1-2021	1.0009	1.0009
7	4-2-2021	7-1-2021	1.0087	1.0087
8	7-2-2021	9-30-2021	1.0087	1.0087
		Highest	1.7563	1.7563

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	0.2249	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.4000e-003	6.4000e-003	0.0000	0.0000	6.4300e-003
Mobile	3.9000e-004	5.0800e-003	3.7600e-003	2.0000e-005	1.1300e-003	2.0000e-005	1.1500e-003	3.0000e-004	2.0000e-005	3.2000e-004	0.0000	1.9772	1.9772	1.4000e-004	0.0000	1.9807
Waste						0.0000	0.0000		0.0000	0.0000	0.5034	0.0000	0.5034	0.0298	0.0000	1.2472
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0236	0.0236	0.0000	0.0000	0.0237
Total	**0.2253**	**5.0900e-003**	**4.3300e-003**	**2.0000e-005**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-004**	**2.0000e-005**	**3.2000e-004**	**0.5034**	**2.0083**	**2.5117**	**0.0299**	**0.0000**	**3.2592**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2249	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.4000e-003	6.4000e-003	0.0000	0.0000	6.4300e-003
Mobile	3.9000e-004	5.0800e-003	3.7600e-003	2.0000e-005	1.1300e-003	2.0000e-005	1.1500e-003	3.0000e-004	2.0000e-005	3.2000e-004	0.0000	1.9772	1.9772	1.4000e-004	0.0000	1.9807
Waste						0.0000	0.0000		0.0000	0.0000	0.5034	0.0000	0.5034	0.0298	0.0000	1.2472
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0236	0.0236	0.0000	0.0000	0.0237
Total	**0.2253**	**5.0900e-003**	**4.3300e-003**	**2.0000e-005**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-004**	**2.0000e-005**	**3.2000e-004**	**0.5034**	**2.0083**	**2.5117**	**0.0299**	**0.0000**	**3.2592**

	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	Site Preparation	Site Preparation	3/1/2020	4/24/2020	5	40	
2	Grading	Grading	4/25/2020	9/25/2020	5	110	
3	Building Construction	Building Construction	9/26/2020	12/17/2021	5	320	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 60

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	100.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

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					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0815	0.8484	0.4303	7.6000e-004		0.0440	0.0440		0.0404	0.0404	0.0000	66.8614	66.8614	0.0216	0.0000	67.4020
Total	**0.0815**	**0.8484**	**0.4303**	**7.6000e-004**	**0.3613**	**0.0440**	**0.4053**	**0.1986**	**0.0404**	**0.2390**	**0.0000**	**66.8614**	**66.8614**	**0.0216**	**0.0000**	**67.4020**

3.2 Site Preparation - 2020

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	1.3900e-003	9.4000e-004	9.3100e-003	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.6602	2.6602	7.0000e-005	0.0000	2.6619
Total	**1.3900e-003**	**9.4000e-004**	**9.3100e-003**	**3.0000e-005**	**2.9000e-003**	**2.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.6602**	**2.6602**	**7.0000e-005**	**0.0000**	**2.6619**

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					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0815	0.8484	0.4303	7.6000e-004		0.0440	0.0440		0.0404	0.0404	0.0000	66.8613	66.8613	0.0216	0.0000	67.4019
Total	**0.0815**	**0.8484**	**0.4303**	**7.6000e-004**	**0.3613**	**0.0440**	**0.4053**	**0.1986**	**0.0404**	**0.2390**	**0.0000**	**66.8613**	**66.8613**	**0.0216**	**0.0000**	**67.4019**

3.2 Site Preparation - 2020

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	1.3900e-003	9.4000e-004	9.3100e-003	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.6602	2.6602	7.0000e-005	0.0000	2.6619
Total	**1.3900e-003**	**9.4000e-004**	**9.3100e-003**	**3.0000e-005**	**2.9000e-003**	**2.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.6602**	**2.6602**	**7.0000e-005**	**0.0000**	**2.6619**

3.3 Grading - 2020

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					0.4770	0.0000	0.4770	0.1978	0.0000	0.1978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2448	2.7609	1.7577	3.4100e-003		0.1196	0.1196		0.1100	0.1100	0.0000	299.6636	299.6636	0.0969	0.0000	302.0865
Total	**0.2448**	**2.7609**	**1.7577**	**3.4100e-003**	**0.4770**	**0.1196**	**0.5966**	**0.1978**	**0.1100**	**0.3078**	**0.0000**	**299.6636**	**299.6636**	**0.0969**	**0.0000**	**302.0865**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2300e-003	2.8600e-003	0.0285	9.0000e-005	8.8600e-003	6.0000e-005	8.9300e-003	2.3500e-003	6.0000e-005	2.4100e-003	0.0000	8.1284	8.1284	2.1000e-004	0.0000	8.1336
Total	**4.2300e-003**	**2.8600e-003**	**0.0285**	**9.0000e-005**	**8.8600e-003**	**6.0000e-005**	**8.9300e-003**	**2.3500e-003**	**6.0000e-005**	**2.4100e-003**	**0.0000**	**8.1284**	**8.1284**	**2.1000e-004**	**0.0000**	**8.1336**

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					0.4770	0.0000	0.4770	0.1978	0.0000	0.1978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2448	2.7609	1.7577	3.4100e-003		0.1196	0.1196		0.1100	0.1100	0.0000	299.6633	299.6633	0.0969	0.0000	302.0862
Total	**0.2448**	**2.7609**	**1.7577**	**3.4100e-003**	**0.4770**	**0.1196**	**0.5966**	**0.1978**	**0.1100**	**0.3078**	**0.0000**	**299.6633**	**299.6633**	**0.0969**	**0.0000**	**302.0862**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2300e-003	2.8600e-003	0.0285	9.0000e-005	8.8600e-003	6.0000e-005	8.9300e-003	2.3500e-003	6.0000e-005	2.4100e-003	0.0000	8.1284	8.1284	2.1000e-004	0.0000	8.1336
Total	**4.2300e-003**	**2.8600e-003**	**0.0285**	**9.0000e-005**	**8.8600e-003**	**6.0000e-005**	**8.9300e-003**	**2.3500e-003**	**6.0000e-005**	**2.4100e-003**	**0.0000**	**8.1284**	**8.1284**	**2.1000e-004**	**0.0000**	**8.1336**

3.4 Building Construction - 2020

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	0.0731	0.6619	0.5813	9.3000e-004		0.0385	0.0385		0.0362	0.0362	0.0000	79.9054	79.9054	0.0195	0.0000	80.3928
Total	**0.0731**	**0.6619**	**0.5813**	**9.3000e-004**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**79.9054**	**79.9054**	**0.0195**	**0.0000**	**80.3928**

3.4 Building Construction - 2020

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	0.0140	0.4225	0.0817	1.0000e-003	0.0230	2.3700e-003	0.0254	6.6500e-003	2.2600e-003	8.9100e-003	0.0000	94.9590	94.9590	7.5800e-003	0.0000	95.1486
Worker	0.0106	7.1800e-003	0.0714	2.3000e-004	0.0222	1.6000e-004	0.0224	5.9100e-003	1.5000e-004	6.0500e-003	0.0000	20.3949	20.3949	5.3000e-004	0.0000	20.4080
Total	**0.0246**	**0.4297**	**0.1531**	**1.2300e-003**	**0.0453**	**2.5300e-003**	**0.0478**	**0.0126**	**2.4100e-003**	**0.0150**	**0.0000**	**115.3538**	**115.3538**	**8.1100e-003**	**0.0000**	**115.5566**

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	0.0731	0.6619	0.5813	9.3000e-004		0.0385	0.0385		0.0362	0.0362	0.0000	79.9054	79.9054	0.0195	0.0000	80.3927
Total	**0.0731**	**0.6619**	**0.5813**	**9.3000e-004**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**79.9054**	**79.9054**	**0.0195**	**0.0000**	**80.3927**

3.4 Building Construction - 2020

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	0.0140	0.4225	0.0817	1.0000e-003	0.0230	2.3700e-003	0.0254	6.6500e-003	2.2600e-003	8.9100e-003	0.0000	94.9590	94.9590	7.5800e-003	0.0000	95.1486
Worker	0.0106	7.1800e-003	0.0714	2.3000e-004	0.0222	1.6000e-004	0.0224	5.9100e-003	1.5000e-004	6.0500e-003	0.0000	20.3949	20.3949	5.3000e-004	0.0000	20.4080
Total	**0.0246**	**0.4297**	**0.1531**	**1.2300e-003**	**0.0453**	**2.5300e-003**	**0.0478**	**0.0126**	**2.4100e-003**	**0.0150**	**0.0000**	**115.3538**	**115.3538**	**8.1100e-003**	**0.0000**	**115.5566**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2386	2.1877	2.0802	3.3800e-003		0.1203	0.1203		0.1131	0.1131	0.0000	290.7048	290.7048	0.0701	0.0000	292.4581
Total	**0.2386**	**2.1877**	**2.0802**	**3.3800e-003**		**0.1203**	**0.1203**		**0.1131**	**0.1131**	**0.0000**	**290.7048**	**290.7048**	**0.0701**	**0.0000**	**292.4581**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0412	1.3835	0.2600	3.6000e-003	0.0838	3.6900e-003	0.0875	0.0242	3.5300e-003	0.0277	0.0000	342.2200	342.2200	0.0262	0.0000	342.8746
Worker	0.0356	0.0232	0.2363	7.9000e-004	0.0809	5.5000e-004	0.0815	0.0215	5.1000e-004	0.0220	0.0000	71.6044	71.6044	1.7000e-003	0.0000	71.6470
Total	**0.0768**	**1.4067**	**0.4962**	**4.3900e-003**	**0.1647**	**4.2400e-003**	**0.1689**	**0.0457**	**4.0400e-003**	**0.0497**	**0.0000**	**413.8244**	**413.8244**	**0.0279**	**0.0000**	**414.5216**

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	0.2386	2.1877	2.0802	3.3800e-003		0.1203	0.1203		0.1131	0.1131	0.0000	290.7044	290.7044	0.0701	0.0000	292.4578
Total	**0.2386**	**2.1877**	**2.0802**	**3.3800e-003**		**0.1203**	**0.1203**		**0.1131**	**0.1131**	**0.0000**	**290.7044**	**290.7044**	**0.0701**	**0.0000**	**292.4578**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0412	1.3835	0.2600	3.6000e-003	0.0838	3.6900e-003	0.0875	0.0242	3.5300e-003	0.0277	0.0000	342.2200	342.2200	0.0262	0.0000	342.8746
Worker	0.0356	0.0232	0.2363	7.9000e-004	0.0809	5.5000e-004	0.0815	0.0215	5.1000e-004	0.0220	0.0000	71.6044	71.6044	1.7000e-003	0.0000	71.6470
Total	**0.0768**	**1.4067**	**0.4962**	**4.3900e-003**	**0.1647**	**4.2400e-003**	**0.1689**	**0.0457**	**4.0400e-003**	**0.0497**	**0.0000**	**413.8244**	**413.8244**	**0.0279**	**0.0000**	**414.5216**

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	3.9000e-004	5.0800e-003	3.7600e-003	2.0000e-005	1.1300e-003	2.0000e-005	1.1500e-003	3.0000e-004	2.0000e-005	3.2000e-004	0.0000	1.9772	1.9772	1.4000e-004	0.0000	1.9807
Unmitigated	3.9000e-004	5.0800e-003	3.7600e-003	2.0000e-005	1.1300e-003	2.0000e-005	1.1500e-003	3.0000e-004	2.0000e-005	3.2000e-004	0.0000	1.9772	1.9772	1.4000e-004	0.0000	1.9807

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	1.00	1.00	2,920	2,920
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1.00	1.00	1.00	2,920	2,920

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	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	9.50	7.30	7.30	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	0.478390	0.030777	0.167800	0.120556	0.019513	0.006321	0.020235	0.145317	0.001626	0.001724	0.005916	0.000950	0.000877
Other Non-Asphalt Surfaces	0.478390	0.030777	0.167800	0.120556	0.019513	0.006321	0.020235	0.145317	0.001626	0.001724	0.005916	0.000950	0.000877

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	6.4000e-003	6.4000e-003	0.0000	0.0000	6.4300e-003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.4000e-003	6.4000e-003	0.0000	0.0000	6.4300e-003
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 Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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 Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	22	6.4000e-003	0.0000	0.0000	6.4300e-003
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**6.4000e-003**	**0.0000**	**0.0000**	**6.4300e-003**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	22	6.4000e-003	0.0000	0.0000	6.4300e-003
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**6.4000e-003**	**0.0000**	**0.0000**	**6.4300e-003**

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	0.2249	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-003
Unmitigated	0.2249	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-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	tons/yr										MT/yr					
Architectural Coating	0.0559					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-003
Total	**0.2249**	**1.0000e-005**	**5.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1100e-003**	**1.1100e-003**	**0.0000**	**0.0000**	**1.1800e-003**

6.2 Area by SubCategory

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	0.0559					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1100e-003	1.1100e-003	0.0000	0.0000	1.1800e-003
Total	**0.2249**	**1.0000e-005**	**5.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1100e-003**	**1.1100e-003**	**0.0000**	**0.0000**	**1.1800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0236	0.0000	0.0000	0.0237
Unmitigated	0.0236	0.0000	0.0000	0.0237

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0.0232	0.0236	0.0000	0.0000	0.0237
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0236**	**0.0000**	**0.0000**	**0.0237**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0.0232	0.0236	0.0000	0.0000	0.0237
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0236**	**0.0000**	**0.0000**	**0.0237**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.5034	0.0298	0.0000	1.2472
Unmitigated	0.5034	0.0298	0.0000	1.2472

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2.48	0.5034	0.0298	0.0000	1.2472
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.5034**	**0.0298**	**0.0000**	**1.2472**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2.48	0.5034	0.0298	0.0000	1.2472
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.5034**	**0.0298**	**0.0000**	**1.2472**

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

Gas Company Road Solar

Kern-San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	60.00	Acre	60.00	2,613,600.00	0
General Light Industry	2.00	1000sqft	0.00	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Gas Company Road Solar - Kern-San Joaquin County, Summer

Project Characteristics -

Land Use - Lot acerage update to match the project.

Construction Phase - Construction phases updated to match that of the project.

Trips and VMT - Trips updated to match that of the project.

Vehicle Trips - Assuming 1 trip per day.

Consumer Products - No emission factor for operational area.

Energy Use - Operational energy use from similar solar project.

Water And Wastewater - Outdoor water use found from similar project.

Construction Off-road Equipment Mitigation -

Gas Company Road Solar - Kern-San Joaquin County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1,110.00	320.00
tblConstructionPhase	PhaseEndDate	11/5/2024	12/17/2021
tblConstructionPhase	PhaseEndDate	8/4/2020	9/25/2020
tblConstructionPhase	PhaseEndDate	3/3/2020	4/24/2020
tblConstructionPhase	PhaseStartDate	8/5/2020	9/26/2020
tblConstructionPhase	PhaseStartDate	3/4/2020	4/25/2020
tblConstructionPhase	PhaseStartDate	1/8/2020	3/1/2020
tblConsumerProducts	ROG_EF	2.14E-05	0
tblEnergyUse	LightingElect	2.70	0.01
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	1.0000e-003
tblEnergyUse	T24NG	17.03	0.00
tblLandUse	LotAcreage	0.05	0.00
tblTripsAndVMT	VendorTripNumber	429.00	100.00
tblTripsAndVMT	WorkerTripNumber	1,099.00	80.00
tblVehicleTrips	ST_TR	1.32	0.50
tblVehicleTrips	SU_TR	0.68	0.50
tblVehicleTrips	WD_TR	6.97	0.50
tblWater	IndoorWaterUseRate	462,500.00	0.00
tblWater	OutdoorWaterUseRate	0.00	23,200.00

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					
2020	4.5387	50.2460	32.5674	0.0638	18.2141	2.1984	20.4126	9.9699	2.0226	11.9925	0.0000	6,351.1043	6,351.1043	1.9471	0.0000	6,372.8944
2021	2.5492	28.4889	20.7090	0.0630	1.3352	0.9920	2.3272	0.3696	0.9331	1.3027	0.0000	6,297.7576	6,297.7576	0.8507	0.0000	6,319.0252
Maximum	**4.5387**	**50.2460**	**32.5674**	**0.0638**	**18.2141**	**2.1984**	**20.4126**	**9.9699**	**2.0226**	**11.9925**	**0.0000**	**6,351.1043**	**6,351.1043**	**1.9471**	**0.0000**	**6,372.8944**

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					
2020	4.5387	50.2460	32.5674	0.0638	18.2141	2.1984	20.4126	9.9699	2.0226	11.9925	0.0000	6,351.1043	6,351.1043	1.9471	0.0000	6,372.8944
2021	2.5492	28.4889	20.7090	0.0630	1.3352	0.9920	2.3272	0.3696	0.9331	1.3027	0.0000	6,297.7576	6,297.7576	0.8507	0.0000	6,319.0252
Maximum	**4.5387**	**50.2460**	**32.5674**	**0.0638**	**18.2141**	**2.1984**	**20.4126**	**9.9699**	**2.0226**	**11.9925**	**0.0000**	**6,351.1043**	**6,351.1043**	**1.9471**	**0.0000**	**6,372.8944**

	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**

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	1.2327	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145
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	2.4800e-003	0.0276	0.0226	1.2000e-004	6.3100e-003	1.0000e-004	6.4100e-003	1.7000e-003	9.0000e-005	1.7900e-003		12.6283	12.6283	8.3000e-004		12.6489
Total	**1.2351**	**0.0276**	**0.0289**	**1.2000e-004**	**6.3100e-003**	**1.2000e-004**	**6.4300e-003**	**1.7000e-003**	**1.1000e-004**	**1.8100e-003**		**12.6418**	**12.6418**	**8.7000e-004**	**0.0000**	**12.6634**

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	1.2327	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145
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	2.4800e-003	0.0276	0.0226	1.2000e-004	6.3100e-003	1.0000e-004	6.4100e-003	1.7000e-003	9.0000e-005	1.7900e-003		12.6283	12.6283	8.3000e-004		12.6489
Total	**1.2351**	**0.0276**	**0.0289**	**1.2000e-004**	**6.3100e-003**	**1.2000e-004**	**6.4300e-003**	**1.7000e-003**	**1.1000e-004**	**1.8100e-003**		**12.6418**	**12.6418**	**8.7000e-004**	**0.0000**	**12.6634**

	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	Site Preparation	Site Preparation	3/1/2020	4/24/2020	5	40	
2	Grading	Grading	4/25/2020	9/25/2020	5	110	
3	Building Construction	Building Construction	9/26/2020	12/17/2021	5	320	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 60

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	100.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0797	0.0436	0.5482	1.6300e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		161.9499	161.9499	4.2500e-003		162.0562
Total	**0.0797**	**0.0436**	**0.5482**	**1.6300e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**161.9499**	**161.9499**	**4.2500e-003**		**162.0562**

3.2 Site Preparation - 2020

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0797	0.0436	0.5482	1.6300e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		161.9499	161.9499	4.2500e-003		162.0562
Total	**0.0797**	**0.0436**	**0.5482**	**1.6300e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**161.9499**	**161.9499**	**4.2500e-003**		**162.0562**

3.3 Grading - 2020

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

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	0.0886	0.0485	0.6091	1.8100e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		179.9444	179.9444	4.7200e-003		180.0624
Total	**0.0886**	**0.0485**	**0.6091**	**1.8100e-003**	**0.1643**	**1.1400e-003**	**0.1654**	**0.0436**	**1.0500e-003**	**0.0446**		**179.9444**	**179.9444**	**4.7200e-003**		**180.0624**

3.3 Grading - 2020

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

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	0.0886	0.0485	0.6091	1.8100e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		179.9444	179.9444	4.7200e-003		180.0624
Total	**0.0886**	**0.0485**	**0.6091**	**1.8100e-003**	**0.1643**	**1.1400e-003**	**0.1654**	**0.0436**	**1.0500e-003**	**0.0446**		**179.9444**	**179.9444**	**4.7200e-003**		**180.0624**

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.3991	12.0605	2.1975	0.0294	0.6780	0.0681	0.7461	0.1953	0.0651	0.2604		3,078.2637	3,078.2637	0.2299		3,084.0101
Worker	0.3543	0.1939	2.4365	7.2200e-003	0.6572	4.5700e-003	0.6618	0.1743	4.2000e-003	0.1785		719.7775	719.7775	0.0189		720.2498
Total	**0.7534**	**12.2544**	**4.6340**	**0.0366**	**1.3352**	**0.0727**	**1.4079**	**0.3696**	**0.0693**	**0.4389**		**3,798.0412**	**3,798.0412**	**0.2488**		**3,804.2599**

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.3991	12.0605	2.1975	0.0294	0.6780	0.0681	0.7461	0.1953	0.0651	0.2604		3,078.2637	3,078.2637	0.2299		3,084.0101
Worker	0.3543	0.1939	2.4365	7.2200e-003	0.6572	4.5700e-003	0.6618	0.1743	4.2000e-003	0.1785		719.7775	719.7775	0.0189		720.2498
Total	**0.7534**	**12.2544**	**4.6340**	**0.0366**	**1.3352**	**0.0727**	**1.4079**	**0.3696**	**0.0693**	**0.4389**		**3,798.0412**	**3,798.0412**	**0.2488**		**3,804.2599**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.3227	10.8845	1.9119	0.0291	0.6780	0.0290	0.7070	0.1953	0.0277	0.2230		3,049.7449	3,049.7449	0.2179		3,055.1916
Worker	0.3256	0.1723	2.2219	6.9700e-003	0.6572	4.4200e-003	0.6616	0.1743	4.0700e-003	0.1784		694.6489	694.6489	0.0168		695.0693
Total	**0.6483**	**11.0568**	**4.1338**	**0.0361**	**1.3352**	**0.0334**	**1.3686**	**0.3696**	**0.0318**	**0.4014**		**3,744.3937**	**3,744.3937**	**0.2347**		**3,750.2609**

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.3227	10.8845	1.9119	0.0291	0.6780	0.0290	0.7070	0.1953	0.0277	0.2230		3,049.7449	3,049.7449	0.2179		3,055.1916
Worker	0.3256	0.1723	2.2219	6.9700e-003	0.6572	4.4200e-003	0.6616	0.1743	4.0700e-003	0.1784		694.6489	694.6489	0.0168		695.0693
Total	**0.6483**	**11.0568**	**4.1338**	**0.0361**	**1.3352**	**0.0334**	**1.3686**	**0.3696**	**0.0318**	**0.4014**		**3,744.3937**	**3,744.3937**	**0.2347**		**3,750.2609**

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	2.4800e-003	0.0276	0.0226	1.2000e-004	6.3100e-003	1.0000e-004	6.4100e-003	1.7000e-003	9.0000e-005	1.7900e-003		12.6283	12.6283	8.3000e-004		12.6489
Unmitigated	2.4800e-003	0.0276	0.0226	1.2000e-004	6.3100e-003	1.0000e-004	6.4100e-003	1.7000e-003	9.0000e-005	1.7900e-003		12.6283	12.6283	8.3000e-004		12.6489

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	1.00	1.00	2,920	2,920
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1.00	1.00	1.00	2,920	2,920

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	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	9.50	7.30	7.30	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	0.478390	0.030777	0.167800	0.120556	0.019513	0.006321	0.020235	0.145317	0.001626	0.001724	0.005916	0.000950	0.000877
Other Non-Asphalt Surfaces	0.478390	0.030777	0.167800	0.120556	0.019513	0.006321	0.020235	0.145317	0.001626	0.001724	0.005916	0.000950	0.000877

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 Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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 Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	1.2327	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145
Unmitigated	1.2327	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145

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	0.3063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145
Total	**1.2327**	**6.0000e-005**	**6.3500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0136**	**0.0136**	**4.0000e-005**		**0.0145**

6.2 Area by SubCategory

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	0.3063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0136	0.0136	4.0000e-005		0.0145
Total	**1.2327**	**6.0000e-005**	**6.3500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0136**	**0.0136**	**4.0000e-005**		**0.0145**

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

ATTACHMENT B

Project Fossil Fuel Emissions Displacement

Project Fossil Fuel Emissions Displacement

Project Fossil Fuel Displacement

Megawatt Project[1]	Operational Time[2]	Annual Hours of Generation[2]	Annual Kilowatt Hours	Heat Rate[3]	Btu Displaced[4]
8.0 MW	25 Percent	2,190 Hours	17,520,000 Kilowatt Hours	9,313	163,163,760,000

[1] *The Project is anticipated to generate 192 megawatts daily. 192 ÷ 24 hours = 8 MW facility*

[2] *The Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually).*

[3] *Heat Rate indicates the energy generator efficiency of existing fossil-fuel based energy generators. The heat rate of a power plant measures the amount of fuel used to generate one unit of electricity. Power plants with lower heat rates are more efficient than plants with higher heat rates. The CEC's "Updated Thermal Power Plant Efficiency Measures and Operational Characteristics for Production Cost Modeling" (2019) estimates heat rates and operating ranges for thermal power plants supplying energy to California. The average heat rate of power plants types are as follows:*
***Steam Boiler fueled by coal: 10,800 heat rate. **Steam Boiler fueled by natural gas: 10,200 heat rate. **Gas Turbine: 10,100 heat rate. **Combined natural gas Boiler and Turbine: 7,640 heat rate.*
Omitting steam boilers fueled by coal since so little of California's energy is derived from coal, the average heat rate = 9,313 [(10,100 + 10,200 + 7,640) ÷ 3 = 9,313]

[4] *25,093,751 anuual kilowatt hours x 9,313 average heat rate of existing fossil fuel generators = 233,698,107,347 Btu displaced from fossil fuel production.*
Energy consumption in California is predominately derived from natural gas (34.91%). Coal constitutes 3.30% of all energy-based energy consumption in California. Renewable sources (not including hydroelectric generators) account for 31.36% and nuclear power accounts for 9.05%. 9.25% of the state's energy comes from unspecificed nonrenewable sources and this percentage is added to the natural gas total for the purpose of this analysis.

56,960,468,616 of the displaced BTU is displaced natural gas consumption and 5,384,404,080 of the displaced BTU is displaced coal.

The heat content of coal is assumed at 24 million Btu per ton of coal burned. At a rate of 24 million Btu per ton of coal burned, the Project would displace 224.4 tons of burned coal annually.

Project Fossil Fuel Emissions Displacement

Fossil Fuel Emissions Displacement by Project[5]

Emissions from Natural Gas Generation

56960.5

Pounds Annually

NOx	CO	PM10	PM2.5	SO2	CO2	CH4	N2O
282	85	268	108	194	6,265,655		

Tons Annually (Metric Tons for GHGs)

NOx	CO	PM10	PM2.5	SO2	CO2	CH4	N2O
0.14	0.04	0.13	0.05	0.10	2,506.26		

Emissions from Coal Generation

224.4

Pounds Annually

NOx	CO	PM10	PM2.5	SO2	CO2	CH4	N2O
2693	112	19	13	128	1,355,376	9	7

Tons Annually (Metric Tons for GHGs)

NOx	CO	PM10	PM2.5	SO2	CO2	CH4	N2O
1.35	0.06	0.01	0.01	0.06	542.15	0.00	0.00

[5] *Source: Displaced emissions calculated by ECORP Consulting using U.S. EPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.*

Project Fossil Fuel Emissions Displacement

Project Fossil Fuel Emissions Displacement

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Biological Technical Report

Gas Company Road Project

City of Taft, Kern County, California

Prepared For:

ZGlobal, Inc.
604 Sutter Street, Suite 250
Folsom, California 95630

Prepared By:

Phillip Wasz
Senior Biologist
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

Under the direction of Principal Biologist:

Donald R. Mitchell

DRAFT

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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1.0 INTRODUCTION

In October 2019, ECORP Consulting, Inc. conducted a biological reconnaissance survey of the 58-acre project site (Project Area) in the City of Taft, Kern County, California (Figure 1. *Project Vicinity*). The survey of the Project Area was conducted pursuant to the terms of the California Environmental Quality Act (CEQA) and for the purposes of identifying any biological constraints that could affect the design of ZGlobal, Inc.'s Gas Company Road Solar Project (Project). The Project is subject to county, state, and federal regulations regarding compliance with the federal Endangered Species Act (ESA), California ESA, Migratory Bird Treaty Act (MBTA), and California Fish and Game Code.

1.1 Location and Setting

The Project Area consists of ± 58 acres located in the northwest quarters of Sections 7, 17, and 18 of Township 32 South, Range 23 East, Mount Diablo Base and Meridian as depicted on the 1973 Taft, CA U.S. Geologic Survey (USGS) 7.5' topographic quadrangle map. It is also known as Assessor Parcel Number (APN) 220-300-14-00. The Project Area, located south of the East Cedar Street and Airport Road intersection, consists of a small triangle portion (accessory parcel) and a larger irregular shaped main portion (Figure 1. *Project Location*). The Project Area is generally bound by undeveloped land and Gas Company Road to the north and east, Farmer Vacuum Services, Inc. to the south, and Airport Road and industrial uses to the west. The Project Area is currently characterized by flat and undeveloped land that has undergone a great deal of disturbance due to past oil drilling.

1.2 Project Description

The Project proposes to install a grid-tie PV system on a tracker ground-mounted racking system spanning the 58-acre site. The major components of the PV system consist of PV modules, inverters, and array single-axis trackers.

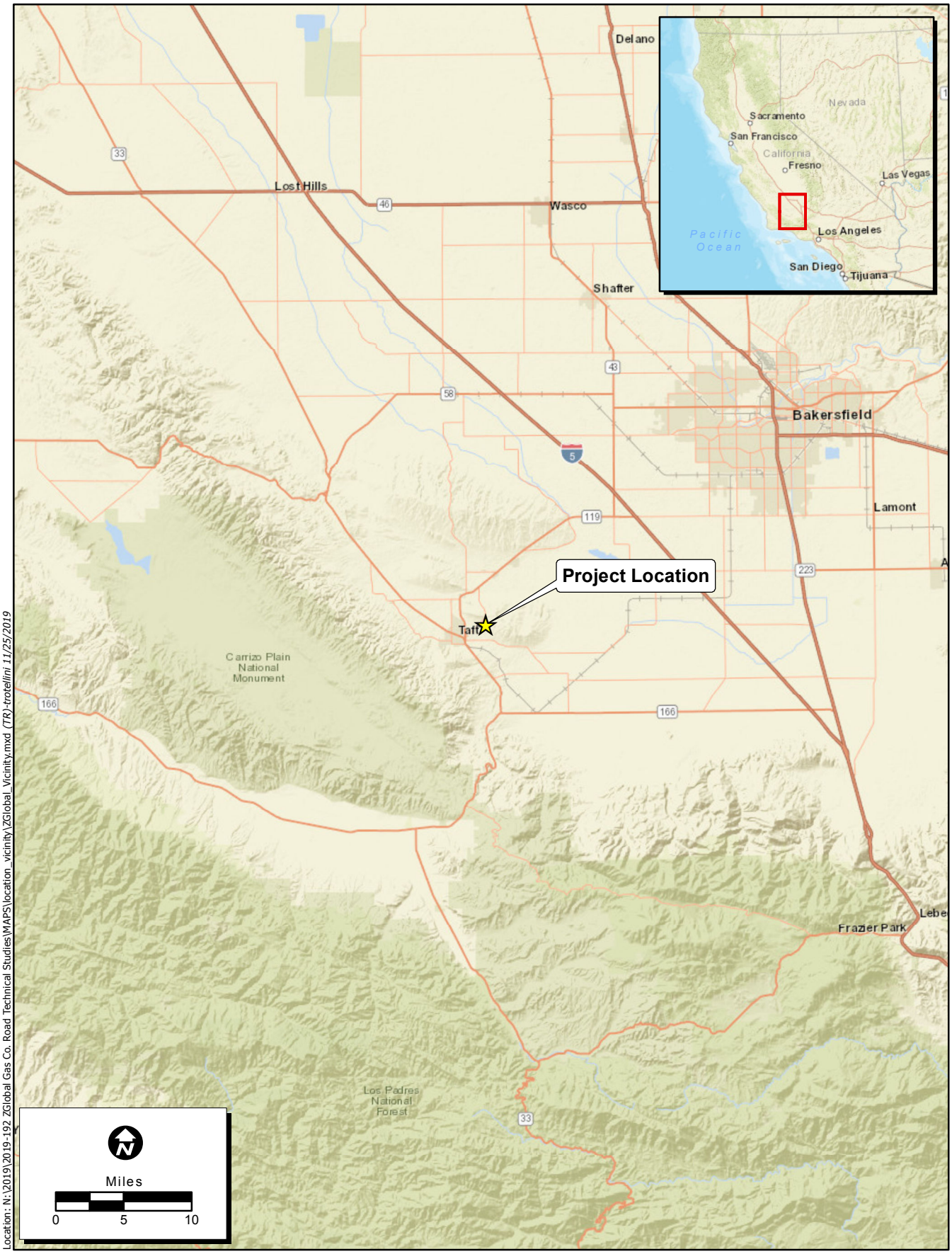
2.0 SPECIAL-STATUS SPECIES REGULATIONS

This biological reconnaissance survey was conducted to identify potential issues and ensure compliance with state and federal regulations regarding listed, protected, and sensitive species and habitats. The regulations are detailed below.

2.1 Federal Regulations

2.1.1 The Federal Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "*harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct*" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with USFWS if their actions, including permit



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Map Date: 11/25/2019

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 1. Project Vicinity

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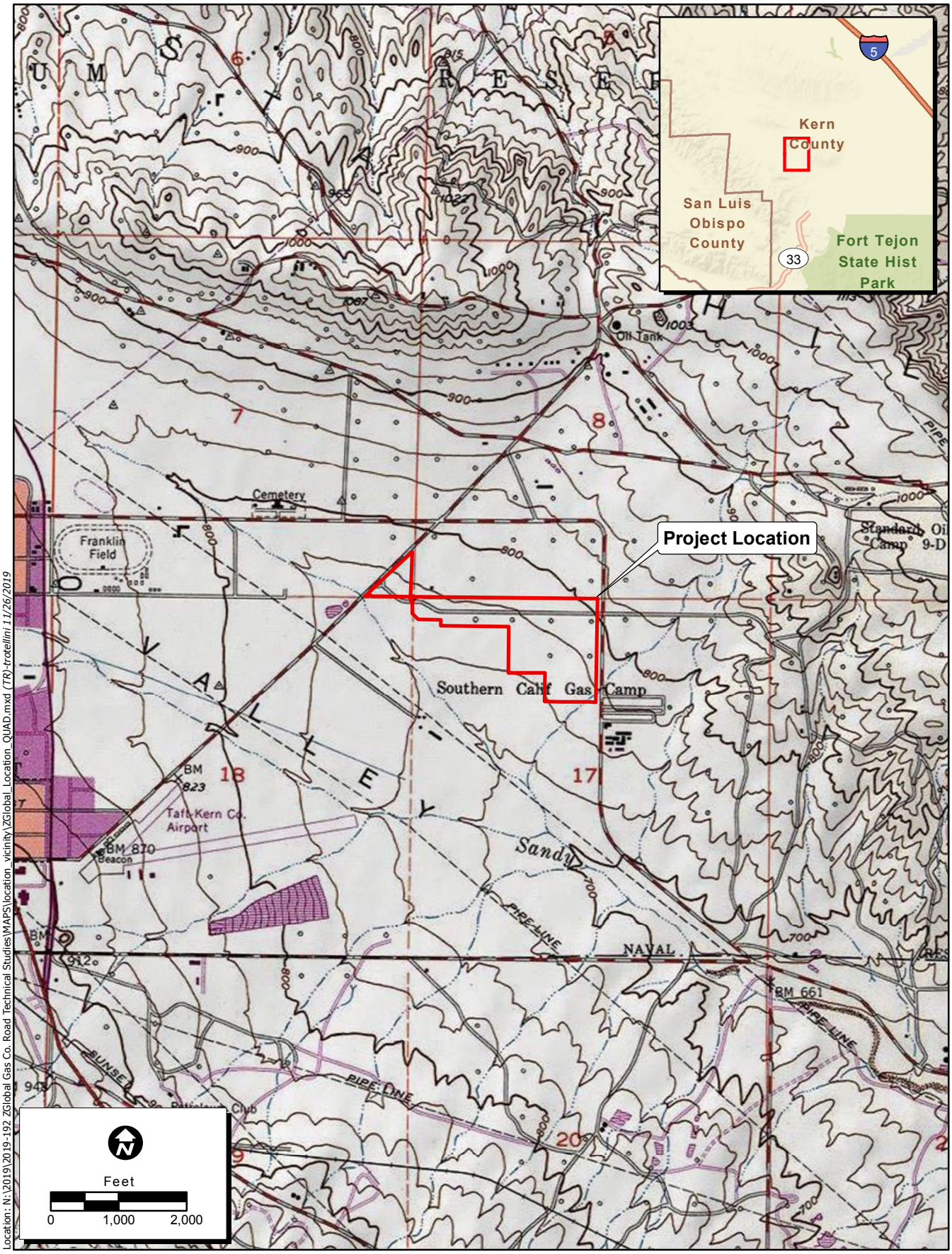

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Map Date: 11/26/2019

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 2. Project Location

2019-192 ZGlobal Gas Co. Road Technical Studies

approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The MBTA implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities including hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

In December 2017, the Department of the Interior (DOI) issued a memorandum reversing the incidental take interpretation of the MBTA. Take of a migratory bird or its active nest (i.e., with eggs or young) that is incidental to a lawful activity does not violate the MBTA.

However, Assembly Bill 454: An important bill seeking to continue protections for California's migratory birds in the face of federal rollbacks today passed a key committee hurdle in the California State Assembly.

2.1.3 Federal Clean Water Act

The federal Clean Water Act's (CWA) purpose is to "*restore and maintain the chemical, physical, and biological integrity of the nation's waters.*" Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (U.S.) without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (USEPA) acts as a cooperating agency to set policy, guidance and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates "fill" or dredging of fill material within its jurisdictional features. "Fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for

Section 404 permit actions; this certification or waiver is issued by the State Water Quality Control Board, administered by each of nine California Regional Water Quality Control Boards.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is

the Streambed Alteration Agreement (SAA). Often, projects that require an SAA also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.5 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

An evaluation of whether an impact to biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that

although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Database (CNDDB; CDFW 2019a) and the California Native Plant Society's (CNPS') Electronic Inventory (CNPSEI; CNPS 2019) to determine the special-status plant and wildlife species that have been documented near the Project Area. The CNDDB and CNPSEI database searches were conducted on October 25, 2019. ECORP searched CNDDB and CNPSEI records within the Project Area boundaries as depicted on USGS 7.5-minute Taft topographic quadrangle, plus the surrounding eight topographic quadrangles, including Buena Vista Lake Bed, East Elk Hills, Elkhorn Hills, Fellows, Maricopa, Pentland, Tupman, and West Elk Hills. The CNDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or near the Project. Additional information was gathered from the following sources and includes, but is not limited to:

- Natural Resources Conservation Service (NRCS) *Web Soil Survey* (NRCS 2019);
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2019b);
- *Special Animals List* (CDFW 2019c);
- *The Jepson Manual* (Hickman 1993);
- *The Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009); and
- various online websites (e.g., Calflora 2019).

Using this information and observations in the field, a list of special-status plant and animal species that have potential to occur on or near the Project Area was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Special-status species reported for the region in the literature review or for which suitable habitat occurs within the Project Area were assessed for their potential to occur within the Project Area based on the following guidelines:

Present:	The species was observed within the Project Area during a site visit or focused survey.
High:	Habitat (including soils and elevation factors) for the species occurs within the Project Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the Project Area.
Moderate:	Habitat (including soils and elevation factors) for the species occurs within the Project Area and a documented observation occurs within the database search, but not within five miles of the area; suitable habitat present and a historic (more than 20 years old) documented observation was recorded within five miles of the Project Area; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs on the Project Area.
Low:	Limited or marginal habitat for the species occurs within the Project Area and a recently documented observation occurs within the database search, but not within five miles of the Area; limited or marginal habitat present and a historic (more than 20 years old) documented observation was recorded within five miles of the Project Area; or suitable habitat strongly associated with the species occurs on the Project Area, but no records or only historic records were found within the database search.
Presumed Absent:	Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Project Area.

Note that location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that species.

A desktop review of the Natural Resources Conservation Service's (NRCS') Web Soil Survey (NRCS 2019) and the corresponding USGS topographic maps was also conducted to determine if there were any aquatic resources that might fall under the jurisdiction of either federal or state agencies were present within the Project Area.

3.2 Field Survey

3.2.1 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted by walking the entire Project Area to determine the vegetation communities and wildlife habitats within the Project Area. The biologist documented the plant and animal species present within the Project Area, and the location and condition of the Project Area were assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were also taken during the survey to provide visual representation of the various vegetation communities within the Project Area. The Project Area was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region. In addition, the biologist noted the vegetation communities present on the Project Area.

Plant and wildlife species, including any special-status species that were observed during the survey, were documented. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles (SSAR 2018), *Check-list of North American Birds* (American Ornithologist's Union [AOU] 2016), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld GPS in NAD 83, Universal Transverse Mercator coordinates, Zone 11S.

3.2.2 Preliminary Aquatic Resources Delineation

A desktop review was conducted to identify potential streams and hydric soils within the Project Area. This entailed examination of the NRCS Soil Mapper (NRCS 2019), National Wetland Inventory (NWI) mapping, and the USGS topographic mapping of the Project Area to aid in identifying potential biological constraints to the Project due to aquatic resources. A preliminary aquatic resources delineation of the Project Area was conducted in the field. The Project Area was walked to look for signs of Ordinary High-Water Mark as defined by the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (USACE 2008). Boundaries of potential Waters of the U.S. and Waters of the State were identified through aerial photograph interpretation and standard field methods including identification of water sources and examination of topography. Boundaries of potential jurisdictional areas were not formally delineated.

4.0 RESULTS

Summarized below are the results of the literature review and field surveys, including characteristics of the Project Area, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

The literature review and database searched identified 18 special-status plant species and 31 special-status wildlife species that occur near the Project Area. A list was generated from the results of the literature review and the Project Area was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list.

4.1.2 USFWS Designated Critical Habitat

The Project Area is not located within any USFWS-designated critical habitat. The closest designated critical habitat is for Buena Vista Lake ornate shrew (*Sorex ornatus relictus*) and is located approximately 10 miles northeast of the Project Area.

4.1.3 Aquatic Resources

The desktop review of the NRCS (2019), NWI, and the USGS topographic map identified a potential aquatic resource in the in the southeast corner of the Project Area. The small riverine feature (drainage) originates somewhere northeast of the project site. The feature flows from the northeast to southwest and crosses through a culvert under Gas Company Road before cutting across the southeast corner of the Project Area.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on October 28, 2019, by ECORP senior wildlife biologist Phillip Wasz. Mr. Wasz has more than nine years of experience conducting surveys and habitat assessments for the special-status plant and wildlife species of the San Joaquin Valley, including San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) burrowing owl (*Athene cunicularia*), giant kangaroo rat (*Dipodomys ingens*) and San Joaquin kit fox (*Vulpes macrotis mutica*). Mr. Wasz is also permitted to trap and handle San Joaquin antelope squirrels under the authority of a Memorandum of Understanding (MOU) with CDFW and giant kangaroo rats under the authority of a USFWS 10(a)(1)(A) endangered species recovery permit (TE-012973-12). Weather conditions during the survey are summarized in Table 1.

Table 1. Weather Conditions During the Survey

Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	end	Min	Max	min	max	min	max
10/28/19	1100	1300	65	71	25	35	0	5

4.2.1 Property Characteristics

The Project Area consists of disturbed nonnative grassland and scrub habitat. The Project Area is bounded by Airport Road on the northwest, Gas Company Road on the east, Farmer Vacuum Services, Inc. on the south and undeveloped land on the north. The majority of the Project Area is generally flat (<5° slope) with an elevation that ranges from 830 feet above mean sea level in the north to 770 feet above mean seal level in the south. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. According to the U.S. Department of Agriculture's (USDA) Web Soil Survey website, the main soil type located within the Project Area is Kimberlina fine sandy loam, drained two to five percent slopes, which is a well-draining soil on alluvial fans. (NRCS 2019). Representative photographs of the Project Area are presented in Appendix A.

4.2.2 Vegetation Communities

Two vegetation communities were present within the Project Area; red brome or Mediterranean grass grassland and allscale scrub. One land cover type, disturbed/developed, was also identified within the Project Area. Classification of the vegetation communities and land cover types within the Project Site generally follow the Manual of California Vegetation (Sawyer et al. 2009) where feasible and are described

in detail below and displayed in Figure 3 (Figure 3. *Vegetation Communities*) and a full list of plant species observed on the Project Area during the survey can be found in Appendix B.

4.2.3 Red Brome or Mediterranean Grass Grassland

Red brome or Mediterranean Grass Grassland (*Bromus rubens-Schismis* [*arabicus*, *barbatus*]) is a vegetation type characterized by low growing grasses where red brome and/or Mediterranean grass make up more than 80% of the relative cover in the herbaceous layer (Sawyer et al 2009). Plant species that are commonly associated with this vegetation community include, but are not limited to, red-stemmed fillaree (*Erodium cicutarium*), foxtail fescue (*Festuca myuros*), and small flowered fiddleneck (*Amsinckia menziesii*). Associated plant species on the Project Area included red-stemmed fillaree, small flowered fiddleneck, vinegarweed (*Trichostema lanceolatum*), and turkey-mullein (*Croton setiger*). Red brome or Mediterranean grass grassland was the dominant vegetation community and was present throughout most of the Project Area (Figure 3).

4.2.4 Allscale Scrub

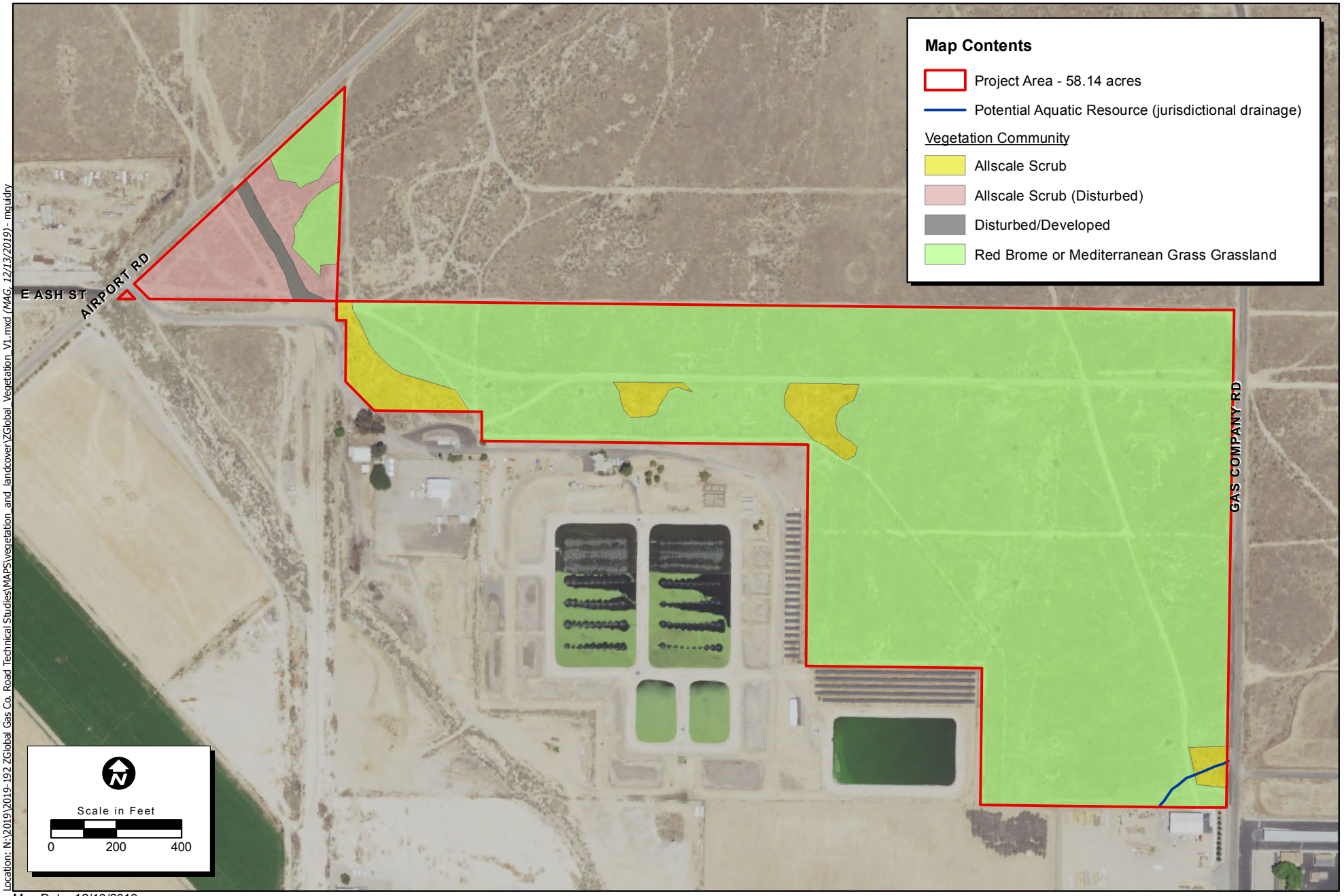
Allscale scrub (*Atriplex polycarpa* shrubland alliance) is a vegetation type characterized by low growing (< 3 meters) shrubs where allscale saltbush is dominant (> 50% relative cover) in the shrub canopy (Sawyer et al 2009). This vegetation community typically occurs in washes, playas, dissected alluvial fans, rolling hills, terraces, and edges of large, low gradient washes with carbonate rich, alkaline, sandy, or sandy clay loam soils (Sawyer et al 2009). Plant species that are commonly associated with this vegetation community include, but are not limited to, red brome, white bursage (*Ambrosia dumosa*), and (*Ambrosia salsola*). Associated plant species on the Project Area included red brome, red-stemmed fillaree, and small flowered fiddleneck. Small patches of allscale scrub were identified along the western border, within the central portion, and along the southeast border of the Project area (Figure 3).

4.2.5 Disturbed/Developed

Disturbed/Developed is not a vegetation classification, but rather a land cover type. Areas mapped as disturbed were largely devoid of native vegetation due to human disturbance and were dominated by open areas or nonnative weedy and ruderal vegetation. Large areas containing dirt roads and bare dirt were also mapped as disturbed. Disturbed areas were mostly associated with the dirt roads and previous disturbance caused by oil pipeline installation and maintenance located along the northwest border of the Project Site.

4.2.6 Wildlife

The grassland and scrub habitat within the Project Area provides habitat for native and nonnative wildlife species. Some wildlife species were observed during the survey, including common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), red-tailed hawk (*Buteo jamaicensis*), and mourning dove (*Zenaida macroura*). A complete list of wildlife species observed on or immediately adjacent to the Project Area is included in Appendix C.



Location: N:\2019\2019-192 ZGlobal Gas Co. Road Technical Studies\MAPS\vegetation_and_landcover\ZGlobal_Vegetation_V1.mxd *(MAG, 12/13/2019)* - mguidry

Map Date: 12/13/2019
Photo Source: NAIP 2018

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure X. Vegetation Communities

2019-192 ZGlobal Gas Co. Road Technical Studies

4.2.7 Potential for Special-Status Plant and Wildlife Species to Occur on the Project Site

The literature review and database searches identified 18 special-status plant species and 31 special-status wildlife species that occur within or near the Project Area. However, due to the Project Area's history and the current lack of suitable habitat for the special-status plant and wildlife species, some of the species are presumed absent from the Project Area.

Special-Status Plants

The literature search documented 18 special-status plant species within the vicinity of the Project Area, two of which were presumed absent due to lack of suitable habitat. Of the remaining sixteen species, two have a high potential to occur, 12 have a moderate potential to occur, and two have a low potential to occur on the Project Area. These species are discussed below and a complete list of the 18 special-status plant species, with detailed habitat requirements, and potential for occurrence designations, is included as Appendix D.

Plant species with a CNPS Rare Plant Rank 3 or 4 were eliminated from the analysis because these rankings are considered a review list and a watch list, respectively. Descriptions of the CNPS designations are found in Table 2 and a list of the seven special-status plant species identified in the literature review is presented below.

Table 2. CNPS Status Designations

List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which we need more information; a review list
4	Plants of limited distribution; a watch list
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California FGC (2019 1984). This interpretation is inconsistent with other definitions.

Plant Species with a High Potential to Occur

The following two species have a high potential to occur in the Project Area because habitat (including soils and elevation factors) for the species occurs within the Project Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the Project Area:

Heartscale

Heartscale (*Atriplex cordulata* var. *cordulata*) is a CNPS 1B.2 plant species that typically occurs in Allscale scrub, meadows and seeps, and sandy valley and foothill grassland habitats (Calflora 2019). This species is also often found in saline or alkaline areas (Calflora 2019). Suitable habitat occurs within the red brome and Mediterranean grass grassland and allscale scrub habitat within the Project Area and one recent (< 20 years old) occurrence has been reported within five miles of the Project Area in 2003 approximately 5.0 miles northeast of the Project Area. Therefore, this species has a high potential to occur.

Kern Mallow

Kern mallow (*Eremalche parryi* ssp. *kernensis*) is a CNPS 1B.1 and federally listed (Endangered) plant species that typically occurs in allscale scrub, pinyon and juniper woodlands, and valley and foothill grassland habitats, often found at edge of hilltops on dry, open sandy to clay soils. (Calflora 2019). Suitable habitat occurs within the red brome and Mediterranean grass grassland and allscale scrub habitat within the Project Area and one recent occurrence has been reported within five miles of the Project Area in 2016 approximately 1.4 miles northwest of the Project Area. Therefore, this species has a high potential to occur.

Plant Species with a Moderate Potential to Occur

The following 12 species have a moderate potential to occur on the Project Area because either habitat for the species occurs within the Project Area and a known occurrence has been reported in the database but not within five miles of the Project Area, habitat for the species occurs within the Project Area and historic (more than 20 years old) observation was recorded within five miles of the Project Area, or a known occurrence within five miles of the Project Area and marginal or limited amounts of habitat occurs on the Project Area:

- Lost Hills crownscale (A*triplex coronata* var. *vallicola*) CNPS 1B.2
- California jewelflower (*Caulanthus californicus*) federal listed (endangered), state-listed (endangered) and CNPS 1B.1
- Lemmon's jewelflower (*Caulanthus lemmonii*) CNPS 1B.2
- Recurved larkspur (*Delphinium recurvatum*) CNPS 1B.2
- Templor buckwheat (*Eriogonum temblorense*) CNPS 1B.2
- Tejon Poppy (*Eschscholzia lemmonii* ssp. *kernensis*) CNPS 1B.1
- Pale-yellow layia (*Layia heterotricha*) CNPS 1B.1
- Munz's tidy-tips (*Layia munzii*) CNPS 1B.2
- Jared's pepper-grass (*Lepidium jaredii* ssp. *jaredii*) CNPS 1B.2
- Showy golden madia (*Madia radiata*) CNPS 1B.2
- San Joaquin woollythreads (*Monolopia congdonii*) federal listed (endangered) and CNPS 1B.2

- Oil neststraw (*Stylocline citroleum*) CNPS 1B.1

Plant Species with a Low Potential to Occur

The following species have a low potential to occur on the Project Area because limited habitat for the species occurs on the Area and a known occurrence has been reported in the database, but not within five miles of the Area or a historic (more than 20 years old) observation was recorded within five miles of the Project Area, or suitable habitat strongly associated with the species occurs on Site, but no records were found in the database search:

- Slough thistle (*Cirsium crassicaule*) CNPS 1B.1
- California alkali grass (*Puccinellia simplex*) CNPS 1B.2

Plant Species Presumed Absent

The following two species are presumed absent from the Project due to the lack of suitable habitat on the Project Site:

- Horn's milk vetch (*Astragalus hornii* var. *hornii*) CNPS 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) CNPS 1B.1

Special-Status Wildlife

Of the 31 special-status wildlife species identified in the literature review, 10 were found to have a high potential to occur, three were found to have a moderate potential to occur, two were found to have a low potential to occur, and 16 species were presumed absent from the Project Area. These species are discussed below and a complete list of the 31 special-status wildlife species, with detailed habitat requirements, and potential for occurrence designations, is included as Appendix E.

Wildlife Species with a High Potential to Occur

The following species have a high potential to occur in the Project Area because habitat (including soils and elevation factors) for the species occurs within the Project Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the Project Area:

San Joaquin (Nelson's) Antelope Squirrel

The San Joaquin antelope squirrel is a state-listed (threatened) species (CDFW 2019b). This species is typically found in grassland and shrubland communities, but they are most prevalent in habitats with sparse to moderate shrub cover and are most often found in allscale scrub communities (USFWS 1998). The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable habitat San Joaquin antelope squirrel. Additionally, numerous small mammal burrows of the appropriate size for San Joaquin antelope squirrel were observed within the grassland habitat and scrub habitat within the Project Area. Twenty-seven recent occurrence records were identified within five miles of the Project Area. The closest documented record consists of three small polygons near the intersection of Airport Road and East Ash Street. One of the three polygons in the CNDDB slightly overlap the northwest corner of the Project Area (CDFW 2019a). Therefore, this species was assigned a high potential to occur within the Project Area. Although San Joaquin antelope squirrels were not observed during the

biological survey, the habitat within the Project Area is suitable for the species, small mammal burrows were present throughout the project site, and multiple recent records of the species have been recorded within the last 20 years, including one record that overlaps a portion of the Project Area. Therefore, this species has a high potential to occur on the project site.

Burrowing owl

The burrowing owl is a CDFW SSC (CDFW 2019b). This species is typically found in dry open areas with few trees and short grasses; it can also be found in vacant lots near human habitation. It uses uninhabited mammal burrows for roosts and nests. It primarily feeds on large insects and small mammals but will also eat birds and small reptiles. The Project Area contains suitable open habitat within the red-brome and Mediterranean grass grassland and allscale scrub habitats. The soils within the Project Area are also suitable for burrowing, and California ground squirrels (*Otospermophilus beecheyi*), for which burrowing owls sometimes rely for burrows, were observed on and adjacent to the Project Area. The Project Area also contains suitable foraging habitat for burrowing owl, because the grassland and scrub habitats likely support a robust insect and small mammal population which make up most of the burrowing owls' prey base. Ten recent burrowing owl records were identified within five miles of the Project Area, with the closest of these observations being documented in 2006 approximately 1.6 miles northeast of the Project Area (CDFW 2019a). Due to the presence of suitable burrowing and foraging habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

Giant Kangaroo Rat

The giant kangaroo rat (*Dipodomys ingens*) is a federal and state listed (endangered) species (CDFW 2019b). This species inhabits sandy-loam soils located on level and gently sloping ground vegetated with annual grasses and forbs and widely-scattered desert shrubs (USFWS 1998). Giant kangaroo rats rely on their senses and speed to avoid predators and typically prefer areas with bare ground or low growing vegetation. Areas of tall and dense vegetation can be problematic for giant kangaroo rat and reduce their ability to spot and evade predators. Therefore, giant kangaroo rats typically do not occupy areas with tall and dense vegetation. The Project Area, consisting of Mediterranean grass grassland and allscale scrub, represented suitable habitat for the species. No giant kangaroo rat precincts were observed on the Project Area during the biological reconnaissance survey. Two recent records of this species occurring within five miles of the site were identified during the literature review and database search (CDFW 2019a). The closest record was identified in 2001 approximately 1.8 miles north of the project site. Due to the presence of suitable habitat and recent records within five miles of the Project Area, this species has a high potential to occur on the Project Area.

Short-nosed kangaroo rat (Dipodomys nitratoides brevinasus)

The short-nosed kangaroo rat is a CDFW SSC (CDFW 2019b). This species generally inhabits flat to gently sloping terrain and is typically associated with desert shrub habitats, and often associates with allscale scrub (USFWS 1998). The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable habitat short-nosed kangaroo rat. Ten recent short-nosed kangaroo rat records were identified within five miles of the Project Area, with the closest of these observations being documented in 2003 approximately 3.2 miles northeast of the Project Area (CDFW 2019a). Due to the

presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

Tipton kangaroo rat (Dipodomys nitratoides nitratoides)

The Tipton kangaroo rat is a federal and state-listed (endangered) species (CDFW 2019b). This species is typically found in alluvial fan and floodplain soils with sparsely vegetated woody shrub cover, including allscale scrub. Woody shrubs that are commonly associated with Tipton kangaroo rat include *Atriplex* spp., iodine bush (*Allenrolfea occidentalis*), and pale-leaf goldenbush (*Ericameria linearifolia*) (NatureServe 2019). Although Tipton kangaroo rats can occur in terrace grasslands devoid of woody shrubs, sparse-to-moderate shrub cover is usually associated with populations of high density (USFWS 1998). The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable habitat for Tipton kangaroo rat. Three recent Tipton kangaroo rat records were identified within five miles of the Project Area, with the closest of these observations being documented in 2012 approximately 4.2 miles east of the Project Area (CDFW 2019a). Due to the presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

Blunt-nosed leopard lizard (Gambelia sila)

The blunt-nosed leopard lizard is a CDFW Fully Protected species and is federal and state-listed (endangered) (CDFW 2019a). This species is found in open, sparsely vegetated areas and is often associated with allscale scrub and grassland habitats (USFWS 1998). Blunt-nosed leopard lizards rely on their speed to avoid predators and typically prefer areas with bare ground or low growing vegetation. The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable blunt-nosed leopard lizard habitat. Four recent blunt-nosed leopard lizard records were identified within five miles of the Project Area, with the closest of these observations being documented in 2006 approximately 3.7 miles south of the Project Area (CDFW 2019a). Due to the presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

Tulare grasshopper mouse (Onychomys torridus tularensis)

Tulare grasshopper mouse is a CDFW SSC (CDFW 2019b). This species is typically found in habitat that contains scattered shrubs with annual grass and forbs and is most often found in saltbush scrub communities. The Project Area, consisting of Mediterranean grass grassland and allscale scrub, contained suitable habitat for the species. Two recent records were identified within five miles of the Project Area, with the closest of these observations being documented in 2017 approximately 1.2 miles southwest of the Project Area. Due to the presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

San Joaquin coachwhip (Masticophis flagellum ruddocki)

The San Joaquin whipsnake is a CDFW SSC (CDFW 2019b). This species typically occurs in open, dry, treeless areas, including grassland and allscale scrub (Stebbins 2003). The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable San Joaquin coachwhip

habitat. One recent record from 2006 was identified approximately 4.1 miles south of the Project Area (CDFW 2019a). Due to the presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

Le Conte's thrasher (Toxostoma lecontei)

Le Conte's thrasher is a CDFW SSC (CDFW 2019B). This species typically occurs in desert flats, dunes, and scrub with sparse saltbush and sometimes creosote bush. The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains suitable habitat for Le Conte's thrasher. Six recent Le Conte's thrasher records were identified within five miles of the Project Area, with the closest of these observations being documented in 2006 approximately 1.9 miles east of the Project Area (CDFW 2019a). Due to the presence of suitable habitat and the recorded observations within five miles of the Project Area, this species has a high potential to occur within the Project Area.

San Joaquin Kit Fox

The San Joaquin kit fox is a federal-listed (endangered) and state-listed (threatened) species (CDFW 2019b). This species prefers annual grasslands or open grassy areas with scattered shrubs and requires loose soils for digging burrows (USFWS 1998). This species is found scattered throughout the San Joaquin Valley, and individuals have been known to occasionally use agricultural land and other areas of marginal habitat adjacent to high-quality habitat for foraging or movement to other areas of their territory. The Project Area, consisting of red brome and Mediterranean grass grassland and allscale scrub, contains soils suitable for denning and the grassland and scrub habitat within the Project Area likely supports an adequate prey base of small mammals for foraging. The literature review identified 14 recent records of the species within five miles of the Project Area (CDFW 2019a), with the closest record being identified in 2001 approximately 0.4 mile north of the Project Area. Due to the presence of suitable denning, foraging, and movement habitat and the recent recorded observations within five miles of the Project Area, this species has a high potential to occur on the Project Area.

Wildlife Species with a Moderate Potential to Occur

The following species have a moderate potential to occur on the Project Area because either habitat for the species occurs within the Project Area and a known occurrence has been reported in the database but not within five miles of the Project Area, habitat for the species occurs within the Project Area and historic (more than 20 years old) observation was recorded within five miles of the Project Area, or a known occurrence within five miles of the Project Area and marginal or limited amounts of habitat occurs on the Project Area:

- California glossy snake (*Bombus crotchii*) CDFW SSC
- Loggerhead shrike (*Lanius ludovicianus*) CDFW SSC
- American badger (*Taxidea taxus*) CDFW SSC

Wildlife Species with a Low Potential to Occur

The following species have a low potential to occur on the Project Area because limited habitat for the species occurs on the Area and a known occurrence has been reported in the database, but not within five

miles of the Area or a historic (more than 20 years old) documented observation was recorded within five miles of the Project Area, or suitable habitat strongly associated with the species occurs on Site, but no records were found in the database search:

- Crotch bumble bee (*Bombus crotchii*) state candidate for listing (endangered)
- Swainson's hawk (*Buteo swainsoni*) state-listed (threatened)

Wildlife Species Presumed Absent

The following species are presumed absent from the Project due to the lack of suitable habitat on the Project Site:

- Tricolored blackbird (*Agelaius tricolor*) state-listed (endangered) and CDFW SSC
- Temblor legless lizard (*Anniella alexanderae*) CDFW SSC
- Bakersfield legless lizard (*Anniella grinnelli*) CDFW SSC
- California legless lizard (*Anniella* sp.) CDFW SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) federal-listed (threatened) and CDFW SSC
- Mountain plover (*Charadrius montanus*) CDFW SSC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) federal-listed (threatened) and state-listed (endangered)
- Fulvous whistling-duck (*Dendrocygna bicolor*) CDFW SSC
- Western pond turtle (*Emys marmorata*) CDFW SSC
- Western mastiff bat (*Eumops perotis californicus*) CDFW SSC
- Kern primrose sphinx moth (Euproserpinus euterpe)
- Buena Vista Lake ornate shrew (*Sorex ornatus relictus*) federal-listed (endangered) and CDFW SSC
- Western spadefoot toad (*Spea hammondii*) CDFW SSC
- Giant gartersnake (*Thamnophis gigas*) federal-listed (threatened) and state-listed (threatened)
- Least Bell's Vireo (*Vireo bellii pusillus*) federal-listed (endangered) and state-listed (endangered)
- Yellow-headed blackbird (*Xanthocephalus Xanthocephalus*) CDFW SSC

4.2.8 Aquatic Resources

Although a formal aquatic resources delineation was not conducted, the biologists noted one small drainage that crosses the southeast corner of the project site (Figure 3). The characteristics observed within this feature suggested that it likely conveyed surface water and/or run off during periods of high precipitation at some point in time. However, it did not contain any riparian vegetation and has since

been cut off by the development of the private property to the south. No other aquatic resources were observed on the project site.

4.2.9 Raptors and Migratory Birds

Potential nesting habitat for migratory birds and raptors protected by the MBTA and California Fish and Game Code was present within the grassland and scrub habitat within the Project Area and construction of the Project has potential to affect nesting birds. Raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August.

4.2.10 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor varies, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor usage and wildlife movement patterns vary greatly among species.

The Project Area was assessed for its ability to function as a wildlife corridor. The Project Area, consisting of grassland and scrub habitat, was open and unimpeded but did not contain any features that typically are associated with facilitating wildlife movement, (e.g.., large drainages, riverbeds). Additionally, the Project Area was bounded by development on the southern border. Therefore, the Project Area would not be considered a linkage or corridor between conserved natural habitat areas.

5.0 IMPACT ANALYSIS

5.1 Special-Status Species

The Project Area, consisting of Mediterranean grass grassland and allscale scrub, contained some areas of historical disturbance but was largely undisturbed and/or recovering from historical disturbances. The literature review and database searches identified 18 special-status plant species that could occur in the vicinity of the Project Area, and although no special-status plant species were observed during the biological survey, the Project Area contained suitable habitat for sixteen special-status plant species with varying levels of potential to occur. Two plant species, heartscale and Kern mallow, were determined to have a high potential to occur on the Project Area based on the presence of suitable habitat and recently documented records of the species within five miles of the Project Area. Kern mallow is a federal listed (endangered) species and impacts to Kern mallow would be considered significant under CEQA. Direct impacts to Kern mallow, heartscale, and other special-status plant species could occur from removal

during grading and construction Implementation of MM BIO-1 and BIO-2 will reduce impacts to a level that is less than significant.

The literature review and database searches identified 31 special-status wildlife species that could occur in the vicinity of the Project Area, and although no special-status wildlife species were observed during the biological survey, the Project Area contained suitable habitat for sixteen special-status wildlife species with varying levels of potential to occur. Ten were found to have a high potential to occur, three were found to have a moderate potential to occur, two were found to have a low potential to occur based on the presence of suitable habitat on the Project Area and recently documented observations of the species near the Project Area. Sixteen special-status wildlife species were presumed absent from the Project Area due to lack of suitable habitat. Therefore, mitigation measures (MMs), including focused surveys, preconstruction surveys, and/or construction monitoring, will be required to ensure that Project related impacts to the special-status wildlife species are less than significant.

San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse were all determined to have a high potential to occur within the Project Area due to the presence of suitable habitat and recently (< 20 years old) recorded records of the species within five miles of the Project Area. Although these species were not observed during the reconnaissance survey, they may still be present on the site or may move onto the site prior to construction. Direct impacts to these special-status small mammal species could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. Impacts to these species could be considered significant under CEQA. However, implementation of MM BIO-2, BIO-3, and BIO-4 will reduce impacts to a level that is less than significant.

Burrowing owl were determined to have a high potential to occur within the Project Area due to the presence of suitable burrowing and foraging habitat and recently recorded observations within five miles of the Project Area. Although burrowing owls were not observed during the reconnaissance survey, the species is mobile and could take up residence at any time. Burrowing owls are a CDFW SSC but are also protected by the MBTA and California Fish and Game Code and impacts to this species could be considered significant under CEQA. Direct impacts to burrowing owl could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. Implementation of MM BIO-2, BIO-5, and BIO-9 will reduce impacts to a level that is less than significant.

Blunt-nosed leopard lizard was determined to have a high potential to occur within the Project Area due to the presence of suitable habitat and recently documented observations within five miles of the Project Area. Blunt-nosed leopard lizard is a federal and state-listed (endangered) and CDFW fully protected species and impacts to this species would be considered significant under CEQA. Direct impacts to blunt-nosed leopard lizard could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. Implementation of MMs BIO-2, BIO-4, and BIO-6 will reduce impacts to a level that is less than significant.

San Joaquin kit fox was determined to have a high potential to occur within the Project Area due to the presence of suitable habitat and documented observations within five miles of the Project Area. San Joaquin kit fox is a federal-listed (endangered) and state-listed (threatened) species and impacts to this species could be considered significant under CEQA. Although San Joaquin kit fox or San Joaquin kit fox dens were not observed during the biological reconnaissance survey, the species is mobile and could take up residence at any time. Direct impacts to San Joaquin kit fox could occur by mortality and habitat loss during ground disturbance and indirect impacts could occur from construction noise, construction vibrations, increased human activity, and increased light pollution. Implementation of MMs BIO-2, BIO-7, and BIO-8 will reduce impacts to a level that is less than significant.

Special status bird species, including Swainson's hawk, Le Conte's thrasher, and Loggerhead shrike, as well as other migratory bird species protected under the MBTA and California Fish and Game Code, could occur within the Project Area due to the presence of suitable nesting and or foraging habitat within the Project Area. If construction of the Project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could indirectly affect birds protected by the MBTA and their nests due to increased human/vehicular activity, noise, ground vibration, and increased dust. Implementation of MM BIO-2 and BIO-9 will reduce impacts to a level that is less than significant.

The Crotch bumble bee, a candidate for state listing as endangered, is not expected to occur on the Project site because no observations have been recorded within five miles of the Project site and the Project site provides low quality habitat for this species. If, however, the Crotch bumble bee is detected on the Project site, then project impacts could occur in the form of mortality and loss of habitat and these impacts would be considered significant. Implementation of BIO-2 and BIO-10 will reduce impacts to a level that is less than significant.

San Joaquin coachwhip was determined to have a high potential to occur and California glossy snake and American badger were determined to have a moderate potential to occur on the Project Area due to the presence of suitable habitat and species records in the vicinity of the Project Area. However, due to the relatively small size of the Project Area, if these species are present within the Project Area, they are likely to only occur in low density and loss of those animals would not be enough to result in a significant impact. Therefore, no focused surveys or mitigation measures are recommended and impacts to these species are considered less than significant.

5.2 Sensitive Natural Communities

In general, the Project Area supports mostly nonnative grasses and forb species with scattered native shrubs. The Project Area does not contain any riparian habitat or sensitive natural communities that would need to be preserved and no Project-related impacts to these types of resources are anticipated with the development of the Project.

5.3 State- and/or Federally Protected Wetlands and Waters

The Project Area contained one potential aquatic resource (small drainage) located in the southeast corner of the Project Area that could be considered jurisdictional to the state or as waters of the United States (Figure 3). The characteristics observed within this feature suggest that it likely conveys surface

water and run off during periods of high precipitation. It is recommended that impacts to this feature be avoided. Should impacts to the drainage be necessary, a formal jurisdictional delineation should be conducted to determine if it is subject to the jurisdiction of the CDFW or USACE. If jurisdictional features are identified on the project site, coordination with the regulatory agencies (USACE, CDFW, RWQCB) regarding regulatory permitting will be required.

5.4 Wildlife Corridors and Nursery Sites

The Project Area contains very little cover that would encourage wildlife movement. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project Area. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur during the development of the Project Area.

5.5 Habitat Conservation Plans and Natural Community Conservation Plans

The Project Area is not located within an HCP or NCCP. Therefore, development of the Project Area will not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional or state HCP.

6.0 RECOMMENDATIONS

The following mitigation measures are recommended prior to Project implementation:

BIO-1 Special-Status Pant Survey: A special-status plant survey shall be conducted within suitable habitat on the Project site for species determined to have a high or moderate potential to occur on the Project Area. The survey shall be conducted during the appropriate blooming period for heartscale, California jewelflower, Kern Mallow, and San Joaquin woollythreads (approximately April to May). Multiple surveys may be necessary to accommodate the different blooming periods for the target species. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the surveys, the location of the individual plant or population will be recorded with a GPS device and impacts to individual plants or populations should be avoid. If Project-related impacts to special-status plants on the Project site are unavoidable, consultation with CDFW and/or USFWS may be required to develop a mitigation plan or additional avoidance and minimization measures, could include seed collection, off-site mitigation or transplantation.

BIO-2 Biological Monitoring: A qualified biologist shall be present to monitor all initial ground-disturbing and vegetation-clearing activities conducted for the Project. During each monitoring day, the biological monitor shall perform clearance survey "sweeps" at the start of each work day that vegetation clearing takes place to minimize impacts on special-status species with potential to occur. The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring shall take place until the Project site has been completely cleared of any vegetation. If an active nest is identified, the biological monitor shall establish

an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS and/or CDFW shall be conducted and a mitigation plan shall be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.

BIO-3 Focused Trapping Surveys for Special-Status Small Mammal Species: San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse may be present within the Project Area. Prior to ground disturbing activities, focused surveys for these species should be conducted by a biologist permitted by CDFW and USFWS to conduct surveys for San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, and Tulare grasshopper mouse. Prior to conducting the trapping survey, a trapping plan shall be submitted to CDFW and USFWS, which details the proposed methods for the survey. The trapping survey should be conducted according to methodologies approved by CDFW and USFWS and according to the conditions of the permitted biologist's state and federal permits. If San Joaquin antelope squirrel, giant kangaroo rat, and/or Tipton kangaroo rat are determined to be present on or immediately adjacent to the Project Area, the Project proponent shall initiate consultation with USFWS and CDFW to obtain the necessary incidental take permit authorizations and determine appropriate avoidance and/or minimization measures, which could include, but is not limited to, salvage trapping, relocation, translocation, and/or burrow excavation.

BIO-4 Small Mammal and Reptile Exclusion Fence: Due to the potential presence of special-status small mammal and reptile species adjacent to the Project Area, an exclusion fence shall be installed prior to construction. The exclusion fencing shall be installed between the Project Area and adjacent suitable habitat for special-status small mammal species. This barrier fencing shall be constructed of metal flashing, plastic sheeting, or other materials to prohibit San Joaquin antelope squirrel, special-status kangaroo rats, or special-status reptiles, including blunt from climbing the fence. The fencing shall be buried a minimum of 18 inches below grade and extend a minimum of 36 inches above grade. The fencing shall be inspected by a qualified biologist on a bi-weekly basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. If San Joaquin antelope squirrel, giant kangaroo rat, or Tipton kangaroo rat are found within the barrier fencing, construction shall cease, and the USFWS and CDFW shall be contacted for further guidance and consultation on additional measures. Fencing may be removed once construction activities are complete.

BIO-5 Pre-Construction Surveys for Burrowing Owl: The Project Area was determined to be suitable for burrowing owl due to the presence of suitable habitat and recent records of the species that have been recorded near the Project Area. Prior to ground disturbing activities, preconstruction surveys for burrowing owl shall be conducted by a qualified biologist to

ensure potential impacts to burrowing owl resulting from Project implementation will be avoided and minimized to less-than-significant levels:

a) A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct preconstruction surveys of the Project Area, plus a 150-meter buffer, to locate active breeding or wintering burrowing owls and burrowing owl burrows between 30 and 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and will consist of walking parallel transects 7 - 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the CDFW and Kern County Planning and Natural Resources Department.

b) A qualified biologist shall conduct an additional preconstruction survey of all impact areas plus an approximately 150-meter buffer no more than 24-hours prior to the start of ground-disturbing activities associated with construction activities to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures.

c) If no burrowing owls are detected, no further action is necessary. If burrowing owls are detected, no ground-disturbing activities shall be permitted within the distances listed in the CDFW *Staff Report on Burrowing Owl Mitigation*, unless otherwise authorized by CDFW. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

d) If any burrowing owl burrows are observed during the preconstruction surveys, avoidance measures shall be consistent with those included in the CDFW *Staff Report on Burrowing Owl Mitigation*. If avoidance of active burrows is no possible, the owls may, in consultation with CDFW be passively displaced from their burrows according to recommendations made in the 2012 *Staff Report on Burrowing Owl Mitigation*.

BIO-6 Focused Blunt-Nosed Leopard Lizard Surveys: Surveys for blunt-nosed leopard lizard (BNLL) shall be conducted according to the methods listed in the CDFW BNLL Protocol for projects leading to habitat removal (e.g. new road, solar development, oil development, residential development) (CDFW 2019). Adult BNLL surveys shall be conducted for 12 days over the course of the 90-day adult optimal survey period (April 15 to July 15), with a maximum of four survey days per week and eight survey days within any 30-day time period. At least one survey session should be conducted for four consecutive days. In addition to the 12 days of adult BNLL surveys required for activities in this category, five additional survey days shall be required during the hatchling optimal survey period (August 15 to September 30), with at least two survey days conducted between August 15 and August 30 and at least 2 survey days between September 15 and September 30, for a total of 17 survey days overall within the same survey season/calendar year. If BNLL are detected during the surveys the project proponent shall notify the CDFW Central Region Permitting and Project Review staff and

USFWS shall be contacted to determine specific mitigation for the species, which could include additional surveys, monitoring, or acquisition of off-site mitigation lands.

BIO-7 Pre-Construction Survey for San Joaquin Kit Fox: The Project Area was determined to be suitable for San Joaquin kit fox. Prior to development of the Project Area, preconstruction surveys for San Joaquin kit fox shall be conducted by a qualified biologist to ensure potential impacts to San Joaquin kit fox resulting from Project implementation will be avoided and minimized to less-than-significant levels. The Survey shall follow the USFWS's *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). If any evidence of occupation of the Project Area by San Joaquin kit fox is observed, a buffer shall be established by a qualified biologist that results in enough avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the USFWS and CDFW shall be contacted for further guidance and consultation on additional measures. If avoidance is not feasible the Project proponent shall initiate consultation with USFWS and CDFW to obtain the necessary incidental take permit authorizations and determine appropriate avoidance and/or minimization measures, which could include, but is not limited to, passive relocation, active relocation and/or burrow excavation.

The following buffer distances shall be established prior to commencement of any preparation or the Project Area and/or construction activities:

a) San Joaquin kit fox potential den: 50 feet;
b) San Joaquin kit fox known den: 100 feet;
c) San Joaquin kit fox pupping den: contact the USFWS and CDFW

BIO-8 San Joaquin Kit Fox Avoidance Measures: Prior to and during construction activities, the Project proponent shall ensure that the Project complies with the following measures to avoid impacts to San Joaquin kit fox:

a) All pipes, culverts, or similar structures with a diameter of four inches or more that are stored within the Project Area for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped.
b) If any San Joaquin kit fox dens are found during preconstruction surveys, the status of the dens shall be evaluated no more than 14 days prior to Project ground disturbance. Provided that no evidence of kit fox occupation is observed, potential dens shall be marked, and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* by the lead biologist (USFWS 2011). If kit fox

activity is observed at a den, the den status shall change to "known" per USFWS Guidelines (USFWS 2011), and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fox known, or pupping dens shall occur without prior authorization from the USFWS and CDFW.

c) To enable kit foxes and other wildlife (e.g., American badger) to pass through the Project Area during construction, the perimeter security fence shall leave a five-inch opening between the fence mesh and the ground or the fence shall be raised five inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence.

d) To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the USFWS and CDFW shall be contacted.

e) Project-related vehicles shall observe a 15-mile-per-hour speed limit in all Project areas, except on County roads and federal and state highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated Project areas shall be prohibited.

f) All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from construction or Project Area.

g) No pets shall be allowed in Project areas, except for trained canine animals related to security and operation of the facility.

h) All uses of such herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the USEPA, California Department of Food and Agriculture, and federal and State legislation as well as additional Project-related restrictions deemed necessary by the CDFW and/or the USFWS.

i) No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary for Project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged but shall only be performed by qualified biologists and with written approval from the CDFW.

BIO-9 Pre-Construction Nesting Bird Survey: If construction or other Project activities are scheduled to occur during the bird breeding season (February through August for raptors and March through August for the majority of migratory bird species), a pre-construction nesting bird survey shall be conducted by a qualified biologist to ensure that active bird nests, including those for the Swainson's hawk, Le Conte's thrasher, and Loggerhead shrike, will not be disturbed or destroyed. The survey shall be completed no more than three days prior to initial ground disturbance. The nesting bird survey shall include the Project Area and

adjacent areas where Project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If no active nests are identified, no further action is necessary. If an active nest is identified, a qualified biologist shall establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist.

BIO-10 Crotch Bumble Bee Surveys and Coordination: The Crotch bumble bee has a low potential to occur on the Project site and focused surveys should be conducted to determine presence of the species. Coordination with CDFW on appropriate survey methods for this species will need to occur because there is no published survey protocol available. If the Crotch bumble bee is present on the Project site and Project impacts are unavoidable, then further coordination with CDFW will need to occur to develop a mitigation plan for the species. Mitigation measures may include seasonal work restrictions and additional biological monitoring.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

SIGNED: _____ DATE: December 16, 2019

Phillip Wasz
Senior Wildlife Biologist
ECORP Consulting, Inc.

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Appendix B – Plant Species Compendium

Appendix C – Wildlife Species Compendium

Appendix D – Special-Status Plant Species Potential

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APPENDIX A

Representative Project Area Photographs

Photo 1: Apex of accessory parcel triangle looking north.

Photo 2: Apex of accessory parcel triangle looking northwest.

Photo 3: Apex of accessory parcel triangle looking west.

Photo 4: Interior of accessory parcel triangle showing saltbush scrub.

Photo 5: Northwest corner of panhandle of project site looking south.

Photo 6: Northwest corner of panhandle of project site looking southeast.

Photo 7: Northwest corner of panhandle of project site looking east.

Photo 8: Potential San Joaquin antelope squirrel burrow on site.

Photo 9: Middle of panhandle of project site looking east.

Photo 10: Potential San Joaquin antelope squirrel burrow.

Photo 11: low growing sparse grass suitable for blunt-nosed leopard lizard.

Photo 12: North border of main portion of project site looking south towards water treatment facility.

Photo 13: North border of main portion of project site looking southeast at water treatment facility.

Photo 14: North border of main portion of project site looking east.

APPENDIX B

Plant Species Compendium

SCIENTIFIC NAME	COMMON NAME
Atriplex polycarpa	allscale saltbush
Amsinckia menziesii	fiddleneck
Brassica nigra	mustard
Bromus tectorum	cheatgrass
Bromus madritensis	red brome
Croton setiger	Doveweed
Erodium cicutarium	red stemmed filaree
Salsola australis	Russian thistle
Schismus arabicus	Mediterranean grass
Trichostema lanceolatum	Vinegarweed

SCIENTIFIC NAME	COMMON NAME
Buteo jamaicensis	red-tailed hawk
Calypte anna	Anna's hummingbird
Charadrius vociferus	killdeer
Corvus corax	common raven
Haemorhous mexicanus	house finch
Mimus polyglottos	northern mockingbird
Sayornis nigricans	black phoebe
Streptopelia decaocto	Eurasian collared dove
Sturnella neglecta	western meadowlark
Sturnus vulgaris	European starling
Zenaida macroura	mourning dove

APPENDIX D

Special-Status Plant Species Potential

APPENDIX C

Special-Status Plant Species Potential to Occur

Scientific Name Common Name	**Status**		**Bloom Period & Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
Astragalus hornii var. ***hornii*** Horn's milk-vetch	Fed: Ca: CNPS:	none none 1B.1	May-Oct 60-850	Occurs in meadows and seeps and playas. Often found in lake margins and alkaline areas.	**Absent**: No suitable habitat occurs on the Project Area
Atriplex cordulata var***. cordulata*** heartscale	Fed: Ca: CNPS:	none none 1B.2	April-Oct 0-560	Occurs in allscale scrub, meadows and seeps, and sandy valley and foothill grassland habitats. Often found in saline or alkaline areas.	**High:** Suitable habitat is present within the Project Area and recent records (< 20 years old) were identified within five miles of the Project Area.
Atriplex coronata var. ***vallicola*** Lost Hills crownscale	Fed: Ca: CNPS:	none none 1B.2	April-Aug 50-635	Occurs in allscale scrub, valley and foothill grasslands, and vernal pool habitats. Often found in alkaline areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Caulanthus californicus California jewelflower	Fed: Ca: CNPS:	**END** **END** 1B.1	Feb-May 61-1000	Occurs in allscale scrub, pinyon and juniper woodlands, and valley and foothill grassland habitats. Often found in sandy areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Caulanthus coulteri var. ***lemmonii*** Lemmon's jewelflower	Fed: Ca: CNPS:	none none 1B.2	March-July 80-1580	Occurs in pinyon and juniper woodlands, and valley and foothill grassland habitats.	**Moderate**: Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Cirsium crassicaule slough thistle	Fed: Ca: CNPS:	none none 1B.1	May-August 3-100	Occurs in chenopod scrub, marshes and swamps, and riparian scrub habitats. Often found in sloughs.	**Low:** Marginally suitable habitat occurs on site and no recent records (< 20 years old) were identified within five miles of the Project Area.
Delphinium recurvatum recurved larkspur	Fed: Ca: CNPS:	none none 1B.2	March-June 3-790	Occurs in allscale scrub, cismontane woodlands, and valley and foothill grassland habitats. Often found in alkaline areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Eremalche parryi ssp. ***kernensis*** Kern mallow	Fed: Ca: CNPS:	**END** none 1B.2	March-May 70-1290	Occurs in allscale scrub, pinyon and juniper woodlands, and valley and foothill grassland habitats. Often found at edge of balds on dry, open sandy to clay soils.	**High:** Suitable habitat is present within the Project Area and recent records (< 20 years old) were identified within five miles of the Project Area.
Eriogonum temblorense Temblor buckwheat	Fed: Ca: CNPS:	none none 1B.2	May 300-1000	Occurs in valley and foothill grassland habitats. Often found in areas with clay or sandstone.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence
Eschscholzia lemmonii ssp. ***kernensis*** Tejon poppy	Fed: Ca: CNPS:	none none 1B.1	March-May 160-1000	Occurs in allscale scrub and valley and foothill grassland habitats.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Lasthenia glabrata ssp. ***coulteri*** Coulter's goldfields	Fed: Ca: CNPS:	none none 1B.1	Feb-June 1-1220	Occurs in coastal salt marshes and swamps, playas, and vernal pool habitats.	**Absent:** No suitable habitat occurs on the Project Area.
Layia heterotricha pale-yellow layia	Fed: Ca: CNPS:	none none 1B.1	March-June 300-1705	Occurs in cismontane woodland, coastal scrub, pinyon and juniper woodlands, and valley and foothill grassland habitats. Often found in alkaline or clay areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Layia munzii Munz's tidy-tips	Fed: Ca: CNPS:	none none 1B.2	March-April 150-700	Occurs in allscale scrub and valley and foothill grassland habitats. Often found in areas with alkaline clay.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Lepidium jaredii ssp. ***jaredii*** Jared's pepper-grass	Fed: Ca: CNPS:	none none 1B.2	March-May 335-1005	Occurs in valley and foothill grassland habitats. Often found in alkaline, adobe areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Madia radiata showy golden madia	Fed: Ca: CNPS:	none none 1B.1	March-May 25-1215	Occurs in cismontane woodland and valley and foothill grassland habitats.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Monolopia congdonii San Joaquin woollythreads	Fed: Ca: CNPS:	**END** none 1B.2	Feb-May 60-800	Occurs in allscale scrub and sandy valley and foothill grassland habitats.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.
Puccinellia simplex California alkali grass	Fed: Ca: CNPS:	none none 1B.2	March-May 2-930	Occurs in allscale scrub, meadows and seeps, valley and foothill grasslands, and vernal pool habitats. Often found in alkaline, vernally mesic; sinks, flats, and lake margins.	**Low**: Marginally suitable habitat occurs on site and no recent records (< 20 years old) were identified within five miles of the Project Area.
Stylocline citroleum oil neststraw	Fed: Ca: CNPS:	none none 1B.1	March-April 50-400	Occurs in allscale scrub, coastal scrub, and valley and foothill grassland habitats. Often found in clay areas.	**Moderate:** Suitable habitat is present within the Project Area but no recent records (< 20 years old) were identified within five miles of the Project Area.

Federal Designations:
(Federal Endangered Species Act, USFWS)

END: federally listed, endangered
THR: federally listed, threatened
CAN: Candidate

State designations:
(California Endangered Species Act, CDFG)

END: state-listed, endangered
THR: state-listed, threatened
CAN: Candidate
Rare: CDFW Rare

Source: California Natural Diversity Data Base (CNDDB) California Native Plant Society Electronic Inventory (CNPSEI) Buena Vista Lake Bed, East Elk Hills, Elkhorn Hills, Fellows, Maricopa, Pentland, Taft, Tupman, and West Elk Hills .7.5-minute topographic quadrangles.

APPENDIX E

Special-Status Wildlife Species Potential

Scientific Name **Common Name**	**Status**		**Habitat**	**Potential for Occurrence**
INVERTEBRATES				
Bombus crotchii Crotch bumble bee	Fed: Ca:	none CE	Occurs in open grassland and scrub habitats.	**Low:** The crotch bumble bee feeds primarily on milkweeds, dusty maidens, lupines, medics, phacelias, and sages. The plants were not identified during the biological survey making the habitat on site marginally suitable. Additionally, no records of the species were identified within five miles of the Project Area.
Euproserpinus euterpe Kern primrose sphinx moth	Fed: Ca:	**THR** none	Found in valley and foothill grassland habitat, and in areas with evening primrose (*Camissonia contorta epilobioides*) which is used as a host plant. This species has previously been found in the Walker Basin, Kern County, and several other scattered locations (Carrizo Plain, Pinnacles NM).	**Absent:** No evening primrose (host plant) were identified on the Project Area and the only know populations in the area include the Walker Basin and the Carrizo Plain.
AMPHIBIA				
Spea hammondii western spadefoot toad	Fed: Ca:	none SSC	Open areas with sandy or gravelly soils in a wide range of habitats including grasslands, coastal sage scrub, alluvial fans, open chaparral, mixed woodlands, foothills, and mountains. Prefers areas with open vegetation and short grasses. Requires rain pools or low-moving streams for breeding and upland habitats for feeding and burrow construction.	**Absent:** No suitable habitat on the Project Area and no records of the species within 10 miles.
REPTILIA				
Anniella alexanderae Temblor legless lizard	Fed: Ca:	none SSC	Typically occurs in sandy soil at the southeast base of the Temblor Ranges, southwestern San Joaquin Valley, Kern County. This species is often found underneath leaf litter, rocks, and logs in sparsely vegetated areas with moist, loose soil.	**Absent:** No suitable moist soil habitat on the Project Area.

Anniella grinnelli Bakersfield legless lizard	Fed: Ca:	none SSC	Often found in sparsely vegetated areas with moist, loose soil, underneath leaf litter, rocks, and logs. This species has previously occurred in two areas of the Southern San Joaquin Valley: he east side of the Carrizo Plain and portions of the city limits of Bakersfield	**Absent:** No suitable moist soil habitat on the Project Area.
***Anniella* sp.** California legless lizard	Fed: Ca:	none SSC	Typically occurs in moist warm loose soil with plant cover or leaf litter in sparsely vegetated beach dunes, pine-oak woodlands, desert scrub, chaparral, alluvial fans, sandy washes, and stream terraces with sycamores, oaks, or cottonwoods. Sometimes found in suburban gardens.	**Absent:** No suitable moist soil habitat on the Project Area.
Arizona elegans occidentalis California glossy snake	Fed: Ca:	none SSC	Most common in desert habitats but also found in arid scrub, rocky washes, grasslands, low elevation coastal scrub, and chaparral. Prefers washes and sandy areas with patchy brush and rocks. Perennial plants necessary in habitat for food source. Prefers habitats with open areas and loose soil for burrowing.	**Moderate:** Suitable habitat was present on the Project Area, but no recent records of the species were identified within five miles.
Emys marmorata Western pond turtle	Fed: Ca:	none SSC	Rivers, creeks, small lakes and ponds, marshes, unlined irrigation canals, and reservoirs; including both permanent and intermittent waters and occasionally brackish waters. Often bask on logs, vegetation mats or rocks.	**Absent:** No suitable standing water habitat was found on the Project Area.
Gambelia sila Blunt-nosed leopard lizard	Fed: Ca:	**END** **END,** FP	Typically occurs in chenopod scrub habitats, and areas of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. This species can be found in mammal burrows, under shrubs or structures such as fence posts.	**High:** Suitable habitat was present on the Project Area and recent records of the species were identified within five miles.
Masticophis flagellum ruddocki San Joaquin coachwhip	Fed: Ca:	none SSC	Typically occurs in chenopod scrub and valley and foothill grassland habitats. Often found in open, dry habitats with little or no tree cover. In the San Joaquin Valley, this species can be found in valley grassland and saltbush scrub. This species uses mammal burrows for refuge and oviposition sites.	**High**: Suitable habitat was present on the Project Area and recent records of the species were identified within five miles.

Thamnophis gigas giant gartersnake	Fed: Ca:	**THR** **THR**	Typically occurs in marsh and swamp, riparian scrub, and wetland habitats. Often found in freshwater marsh and low gradient streams but has adapted to drainage canals and irrigation ditches.	**Absent:** No marsh or wetland habitat was present on the Project Area.
AVES				
Agelaius tricolor tricolored blackbird	Fed: Ca:	none **END,** SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	**Presumed Absent.** No suitable habitat was present on the Project Site**.**
Athene cunicularia burrowing owl	Fed: Ca:	none SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Also uses vacant lots or airports when prey and suitable burrow sites are available. Nests in abandoned dirt burrows.	**High:** Suitable habitat was present on the Project Area and recent records of the species were identified within five miles.
Buteo swainsoni Swainson's hawk (nesting)	Fed: Ca:	none **THR**	Open pine-oak woodland, savannah, and agricultural fields with scattered trees. Nests in solitary bush or tree, or in small groves.	**Low:** No nesting habitat was present on the Project Area and no recent records were identified within five miles.
Charadrius alexandrinus nivosus western snowy plover	Fed: Ca:	**THR** SSC	Forages in dry or wet sandy beaches often among washed up kelp. Needs sandy, gravelly or friable soils above high tide line for nesting. May nest on sandy beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. Known protected population in the Tijuana Estuary.	**Absent:** No suitable habitat was present on the Project Area.
Charadrius montanus mountain plover	Fed: Ca:	none SSC	Typically found in short grasslands, grazed areas, freshly plowed fields, newly sprouting grain fields, areas with burrowing rodents, and sometimes sod farms. This species prefers areas with short vegetation, bare ground, and flat topography.	**Absent:** No suitable habitat was present on the Project Area.
Coccyzus americanus occidentalis western yellow-billed cuckoo	Fed: Ca:	**THR** **END**	Riparian forest nester, typically along the broad, lower flood-bottoms of larger river systems. Prefers dense understory and second-growth stands of willow and cottonwood that are often streamside.	**Absent:** No suitable habitat was present on the Project Area.

Dendrocygna bicolor fulvous whistling-duck	Fed: Ca:	none SSC	Typically found in freshwater marsh and swamp habitats. This species is often found in areas with tule and cattails.	**Absent:** No suitable habitat was present on the Project Area.
Lanius ludovicianus loggerhead shrike (nesting)	Fed: Ca:	none SSC	Open country, with scattered shrubs and trees or other perches for hunting; includes agricultural fields, riparian areas, deserts, grasslands, savanna, and chaparral. Breeds in variety of semi-open terrain.	**Moderate:** Suitable habitat was present on the Project Area, but no recent records of the species were found within five miles.
Toxostoma lecontei Le Conte's thrasher	Fed: Ca:	none SSC	Desert flats, dunes, and scrub with sparse saltbush and sometimes creosote bush.	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.
Vireo bellii pusillus least Bell's vireo (nesting)	Fed: Ca:	**END** **END**	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Riparian woodlands and willow-cottonwood forests particularly with streamside thickets and dense brush. Usually nests in willow, mulefat, mesquite.	**Absent:** No suitable habitat was present on the Project Area.
Xanthocephalus Xanthocephalus yellow-headed blackbird	Fed: Ca:	none SSC	Occurs in wetland, and marsh and swamp habitats. This species typically nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or pond where large insects such as Odonata are abundant.	**Absent:** No suitable habitat was present on the Project Area.
MAMMALIA				
Ammospermophilus nelsoni San Joaquin (Nelson's) antelope squirrel	Fed: Ca:	none **THR**	Dry and relatively flat terrain with alluvial, sandy, or gravelly soils with grassy cover and sparsely spaced shrubs (such as saltbush, ephedra, bladderpod).	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.
Dipodomys ingens Giant kangaroo rat	Fed: Ca:	**END** **END**	Inhabits sandy-loam soils located on level and gently sloping ground vegetated with annual grasses and forbs and widely-scattered desert shrubs.	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.
Dipodomys nitratoides brevinasus Short-nosed kangaroo rat	Fed: Ca:	none SSC	Occurs in alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.
Dipodomys nitratoides nitratoides Tipton kangaroo rat	Fed: Ca:	**END** **END**	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.

Eumops perotis californicus western mastiff bat	Fed: Ca:	None SSC	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	**Absent:** No suitable habitat was present on the Project Area.
Onychomys torridus tularensis Tulare grasshopper mouse	Fed: Ca:	none SSC	Occurs in habitat that contains scattered shrubs with annual grass and forbs and is most often found in saltbush scrub communities	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.
Sorex ornatus relictus Buena Vista Lake Ornate Shrew	Fed: Ca:	**END** SSC	Occurs in marshlands and riparian areas in the Tulare Basin. This species prefers moist soil, and uses stumps, logs and litter for cover.	**Absent:** No suitable habitat was present on the Project Area.
Taxidea taxus American badger	Fed: Ca:	none SSC	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	**Moderate:** Suitable habitat was present on the Project Area, but no recent records of the species were identified within five miles.
Vulpes macrotis mutica San Joaquin kit fox	Fed: Ca:	**END** **THR**	Occurs in chenopod scrub, annual grasslands or grassy open stages with scattered shrubby vegetation. This species requires loose-textured sandy soils for burrowing, and suitable prey base.	**High:** Suitable habitat was present on the Project Area and records of the species were found within five miles.

Federal Designations (Federal Endangered Species Act, USFWS)

END: federally listed, endangered
THR: federally listed, threatened
DL: federally delisted

State designations: (California Endangered Species Act, CDFW)

END: state-listed, endangered
THR: state-listed, threatened
SSC: California Species of Special Concern
FP: Fully Protected species
CE: Candidate Endangered

Source: California Natural Diversity Data Base (CNDDB) California Native Plant Society Electronic Inventory (CNPSEI) Buena Vista Lake Bed, East Elk Hills, Elkhorn Hills, Fellows, Maricopa, Pentland, Taft, Tupman, and West Elk Hills 7.5-minute topographic quadrangles.

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CONFIDENTIAL

Cultural Resources Inventory Report
Gas Company Road Solar Project

Kern County, California

Prepared For:

Z Global
750 West Main Street
El Centro, California 92243

Prepared By:

Paige Liss, Wendy Blumel, RPA, and John O'Connor, Ph.D., RPA
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

Under the direction of Principal Investigator:

John O'Connor, Ph.D., RPA

December 2019

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

MANAGEMENT SUMMARY

ECORP Consulting, Inc. conducted a cultural resources investigation for the Z Global Gas Company Road Project (Project), a solar project proposed for an approximately 60-acre parcel (Project Area) in the City of Taft, Kern County, California. This investigation was conducted in support of the construction of eight-Megawatt (MW)/24 Megawatt-hour (MWh) Photovoltaic (PV) and Battery Energy Storage Systems (BESS).

The inventory included a records search, literature review, and field survey. In October 2019, a cultural resources records search was conducted at the Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield, and a search of the Sacred Lands File was requested from the Native American Heritage Commission (NAHC). The records search results indicated that 67 cultural resources were previously identified within a one-mile radius of the Project Area. No cultural resources were previously documented within the Project Area. The records search indicated that the Project Area had been previously surveyed in 1977. The results of the Sacred Lands File search by the NAHC did not indicate the presence of any Native American cultural resources within one mile of the Project Area.

As a result of the field survey, six cultural resources were recorded inside the Project Area: one historic-era site consisting of historic-period oil features, three pre-contact (prehistoric) isolates, and two historic-era isolates. These resources were evaluated for the California Register of Historical Resources (CRHR) and are not eligible for the CRHR under any criteria. Recommendations for the management of unanticipated discoveries are also provided.

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Attachment A – Records Search Confirmation

Attachment B – Sacred Lands File Coordination

Attachment C – Project Area Photographs

Attachment D – ***Confidential*** Cultural Resources Site Locations and Site Records

1.0 INTRODUCTION

In October 2019, ECORP Consulting, Inc. conducted a cultural resources inventory of the proposed Project Area located in the City of Taft, Kern County, California for Z Global. A survey of the property was required to identify potentially eligible cultural resources (archaeological sites and historic buildings, structures, and objects) that could be affected by the Project.

1.1 Project Location

The Project Area consists of approximately 60 acres of property located in the southeast quarter of Section 7 and the northwest quarter of Section 17 of Township 32 South, Range 23 East, Mount Diablo Base and Meridian as depicted on the 1973 Taft, CA U.S. Geological Survey (USGS) 7.5' topographic quadrangle map (Figures 1 and 2). It is also known as Assessor's Parcel Number 220-300-14-00. The Project Area is located south of the East Cedar Street/Airport Road intersection. The irregular shaped site is generally bound by undeveloped land and Gas Company Road to the north and east, a wastewater treatment plant to the south, and Airport Road and industrial uses to the west (see Figure 2). The Project Area is currently characterized by flat and undeveloped land that has undergone a great deal of disturbance due to past oil drilling.

1.2 Project Description

The Project proposes the construction of eight-Megawatt (MW)/24 Megawatt-hour (MWh) Photovoltaic (PV) and Battery Energy Storage Systems (BESS), a grid-tie PV system on a tracker ground-mounted racking system spanning the 60-acre site. The major components of the PV system consist of PV modules, inverters, and array single-axis trackers.

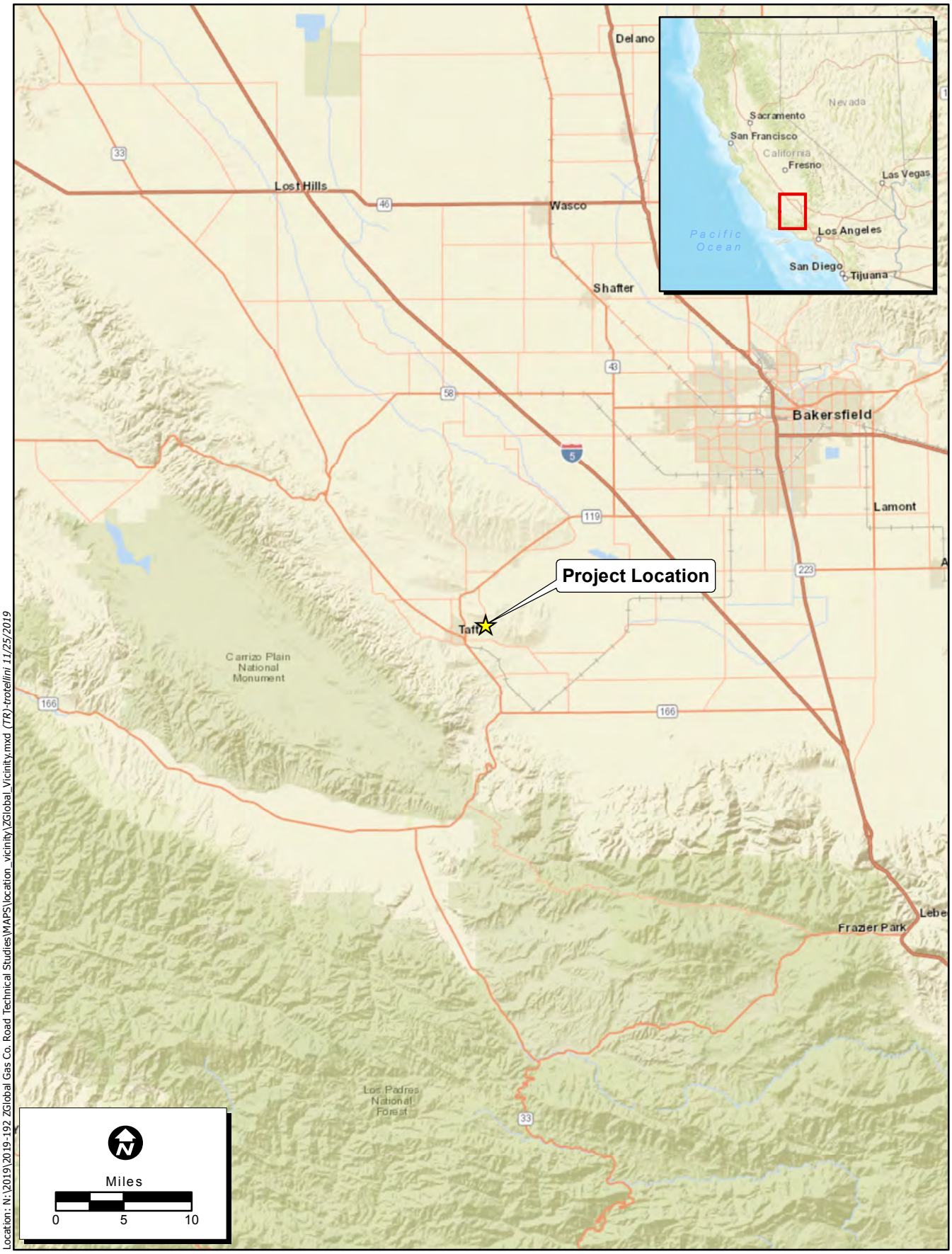
1.3 Project Area

The Project Area consists of the horizontal and vertical limits of the Project and includes the area within which significant impacts to Historical Resources could occur as a result of the Project.

The horizontal Project Area consists of all areas where activities associated with the Project are proposed and, in the case of the current Project, equals the Project Area subject to environmental review under the California Environmental Quality Act (CEQA). This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official Project description. The horizontal Project Area is illustrated in Figures 1 and 2 and also represents the survey coverage area. At maximum dimensions, it measures approximately 0.4 miles (north to south) by 0.65 miles (east to west).

The vertical Project Area is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical Project Area includes all subsurface areas where archaeological deposits could be affected. The study assumes the depth of ground disturbance with not exceed 6 feet, and therefore, review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical Project Area also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. For the current Project, the above-surface vertical Project Area is assumed to be no more than 50 feet above the surface, which is the maximum height of the existing power lines.



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Map Date: 11/25/2019

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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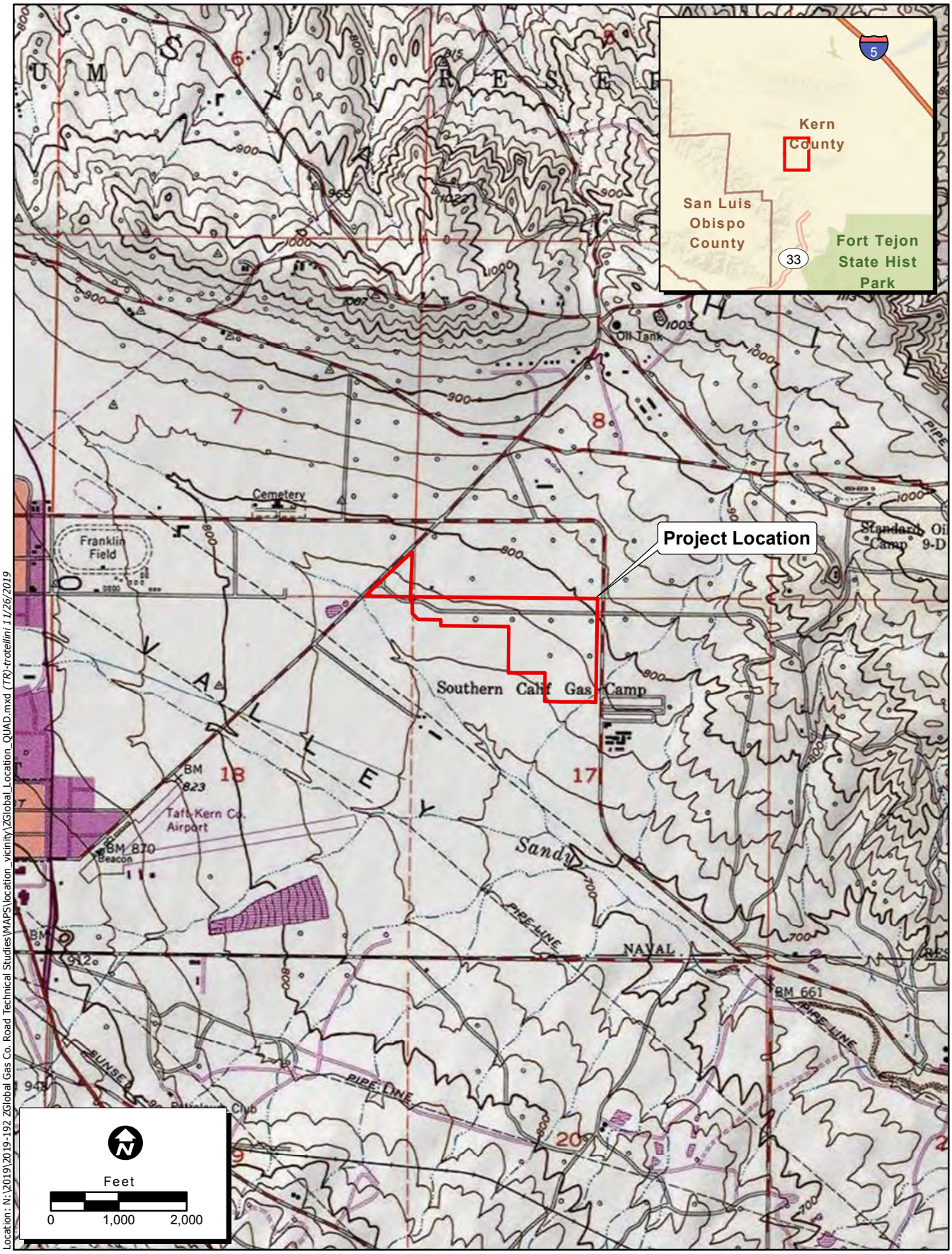
Figure 1. Project Vicinity

2019-192 ZGlobal Gas Co. Road Technical Studies



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Map Date: 11/26/2019

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 2. Project Location

2019-192 ZGlobal Gas Co. Road Technical Studies

1.4 Regulatory Context

To meet the regulatory requirements of this Project, the cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within CEQA (Public Resources Code [PRC] § 21000 et seq.) The goal of CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require state or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps.

CEQA (Title 14, California Code of Regulations [CCR], Article 5, § 15064.5) apply to cultural resources of the historic and pre-contact periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the California Register of Historical Resources (CRHR) (PRC § 5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

Tribal Cultural Resources are defined in Section 21074 of the California PRC as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are 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 Section 5024.1. Section 1(b)(4) of Assembly Bill (AB) 52 established that only California Native American tribes, as defined in Section 21073 of the California Public Resources Code, are experts in the identification of Tribal Cultural Resources and impacts thereto. Because ECORP does not meet the definition of a California Native American tribe, this report only addresses information for which ECORP is qualified to identify and evaluate, and that which is needed to inform the cultural resources section of CEQA documents. This report, therefore, does not identify or evaluate Tribal Cultural Resources. Should California Native American tribes ascribe additional importance to, or interpretation of archaeological resources described herein, or provide information about non-archeological Tribal Cultural Resources, that information is documented separately in the AB 52 tribal consultation record between the tribe(s) and lead agency and summarized in the Tribal Cultural Resources section of the CEQA document, if applicable.

1.5 Report Organization

The following report documents the study and its findings and was prepared in conformance with the California Office of Historic Preservation's (OHP) *Archaeological Resource Management Reports:*

Recommended Contents and Format. Attachment A contains documentation of a search of the Sacred Lands File. Attachment B presents photographs of the Project Area. Attachment C contains confidential cultural resources site locations and site records.

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code § 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 54950 et seq.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 U.S. Code 5 [USC]), because the disclosure of cultural resources location information is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh) and Section 304 of the National Historic Preservation Act (NHPA), it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the California Historical Resources Information System (CHRIS) maintained by the OHP prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resources investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format.

2.0 NATURAL SETTING

The Project Area is located on the northeast edge of the City of Taft, California. The Project Area is bounded by Airport Road on the northwest, Gas Company Road on the east, Farmer Vacuum Services, Inc. on the south, and undeveloped land on the north. The majority of the Project Area is generally flat (<5° slope) with an elevation that ranges from 830 feet above mean sea level in the north to 770 feet above mean seal level in the south. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. According to the U.S. Department of Agriculture's (USDA) Web Soil Survey website (USDA 2016), the main soil type located within the Project Area is Kimberlina fine sandy loam (211), drained 2 to 5 percent slopes, a well-draining soil on alluvial fans. The top 0 to 20 inches contain a fine sandy loam and a sandy loam extending down to 60 inches below surface. The geology of the Project Area consists of Holocene alluvial deposits (Dibblee and Minch 2005). Due to the location of the Project Area on alluvial fans, it is possible that any archaeological material found within this area originated from further upslope or has been buried due to landscape changes over time.

The dominant plant community within the Project Area includes a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. The wildlife species that may occur in the Project Area include but are not limited to western meadowlark, American kestrel, barn owl, red-tailed hawk, American crow, common raven, Heermann's kangaroo rat, California pocket mouse, deer mouse, long-tailed pocket mouse, black-tailed jackrabbit, and coyote.

3.0 CULTURAL CONTEXT

3.1 Regional Pre-contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous

projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found but cannot definitively be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods (Wallace 1978).

Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon (Wallace 1978). Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period (Wallace 1978).

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities were higher than before and settlement became concentrated in villages and communities along the coast and interior valleys (Erlandson 1994; McCawley 1996). Regional subcultures also started to develop, each with its own geographical territory and language or dialect (Kroeber 1925; McCawley 1996; Moratto 1984). These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century (Wallace 1978). Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction (Erlandson 1994). The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points (Wallace 1978; Moratto 1984).

3.2 Local Prehistory

The earliest human use of the southern San Joaquin Valley is indicated by a few projectile points similar to Clovis spear points. Elsewhere in North America, Clovis points are dated to 11,550 and 9,550 BC. In addition, hundreds of early concave base points were found along a past shoreline of Tulare Lake in association with human bone that has been dated to 13,800 to 9,400 BP. This indicates that small bands of hunters were present around Tulare Lake at this early time period (Rosenthal, White, and Sutton 2007:151). The Lower Archaic Period (8,550 to 5,550 BC) is also represented archaeologically by individual flaked stone tools, including stemmed points, concave base points, and crescents, around Tulare Lake. No evidence of camp sites or other residential sites has been found. A site near Buena Vista Lake yielded three crescents, a stemmed projectile point, and several small flaked stone tools. Animal bones indicated use of fish, waterfowl, freshwater mussels, and artiodactyls (probably deer and pronghorn antelope) (Rosenthal, White, and Sutton 2007:151).

During the Middle Archaic Period (5,550 to 550 BC), warmer, drier conditions prevailed. Tulare Lake decreased in size and eventually dried completely. Toward the end of this period in the northern San Joaquin Valley, residential sites are found along the rivers in the valley with temporary camps elsewhere. Specialized fishing technology, including gorge hooks, composite bone hooks, and spears is found in these sites, along with abundant fish bone. Few sites dating to this period have been found in the southern San Joaquin valley, possibly due to the desiccation of Tulare Lake (Rosenthal, White, and Sutton 2007:152, 155).

Cooler, wetter conditions returned at the beginning of the Upper Archaic Period (550 BC to AD 1000) and Tulare, Buena Vista, and Kern Lakes filled with water. However, few sites dating to this period are known from the southern San Joaquin Valley, possibly because they were buried by later deposition. Two sites excavated at Buena Vista Lake in the 1930s have house floors and subsistence waste indicating exploitation of both aquatic and terrestrial environments (Rosenthal, White, and Sutton 2007:155, 157). These sites have roasting pits, charmstones, bone strigils and bipoints, limpet shell ornaments, and *Olivella* half-shell and saucer beads (Moratto 1984:186). The cultures in place at the time of European contact developed during the Emergent Period (AD 1000 to the Historic Period). Sites at Buena Vista Lake from this period have numerous house pits, triangular arrow points, an elaborate steatite industry, and pottery (Moratto 1984:188).

3.3 Ethnography

Prior to the arrival of Euro-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Kroeber (1925, 1936), and others (i.e., Murdock 1960; Driver 1961), recognized the uniqueness of California's indigenous groups and classified them as belonging to the California culture area. Kroeber (1925) further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central.

The predominant Native American group which occupied the region encompassing the Project Area at the time of European contact in the late eighteenth century was the Southern Valley Yokuts. The southern San Joaquin Valley was originally covered by sloughs and marshes surrounding three shallow lakes: Tulare Lake, Buena Vista Lake, and Kern Lake. The lakes were fed by rivers coming from the Sierras, such as the Kern River. Areas away from the lakes, rivers, and sloughs were dry because the valley receives less than 10 inches of rain per year. The Southern Valley Yokuts obtained fish, freshwater mussels, turtles, and waterfowl from the lakes and marshes. Fishing was carried out year-round. Elk and pronghorn antelope were hunted from blinds when they came to the lakes to drink. Grass and tule seeds were important plant foods. Since there were no oak trees on the valley floor, acorns were not an important food (Wallace 1978).

The Yokuts lived in villages occupied year-round near lakes, sloughs, and rivers. However, groups of people left the village and lived in temporary camps while collecting seeds in the spring. Single family houses consisted of wood frames covered with tule mats. There were also large multi-family communal residences that were long mat-covered rectangular structures with steep pitched roofs. These structures were divided into sections so that each family had their own fireplace and door. A shade porch, where cooking took place, ran along the front of the building. Seeds, roots, and dried fish were stored in mat-

covered granaries raised off the ground. Each village also had an earth-covered sweathouse for use by men. Tule was used to make baskets and cradles. Wood and stone were obtained through trade with groups outside the valley. Marine shells obtained from coastal people were made into beads by the Yokuts. Clamshell disks circulated as primitive money and *Olivella* beads and abalone pendants were strung for necklaces. Canoes and rafts made of tule were used for water transport (Wallace 1978).

The Southern Valley Yokuts were organized in territorial tribelets with an average population of 350 people. Each tribelet spoke a different dialect and claimed the resources within its territory. Each tribelet had a chief who belonged to the Eagle lineage. Usually there was more than one village in a tribelet territory. The Project Area was probably in the territory of the Tulamni tribelet which had villages around L Buena Vista Lake, probably along drainages between the end of Kern River and Tulare Lake (Wallace 1978). Buena Vista Lake is about 15 miles northeast of the Project Area. There were no villages in the Project vicinity. Temporary camps used by seed collecting parties could have been used in the Project vicinity. However, the Project vicinity lacks water sources. Therefore, camps for seed collecting are more likely in the Midway and San Joaquin valleys to the west where drainages fed by springs provided water sources.

3.4 Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978).

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. No missions were established in the Central Valley. The nearest missions were in the vicinity of San Francisco Bay and included Mission San Francisco de Asis (Dolores) established in 1776 on the San Francisco peninsula, Mission Santa Clara de Asis at the south end of San Francisco Bay in 1777, Mission San Jose in 1797, Mission San Rafael, established as an *asistencia* in 1817 and a full mission in 1823, and Mission San Francisco Solano in Sonoma in 1823 (Castillo 1978; California Spanish Missions 2011). Presidios were established at San Francisco and Monterey. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who

were camped there, but no permanent settlements were established by the fur trappers (Thompson and West 1880).

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos" (Robinson 1948). During the Mexican period there were small towns at San Francisco (then known as Yerba Buena) and Monterey. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the U.S. in 1848. As a result of the treaty, Alta California became part of the U.S. as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862) (Robinson 1948).

3.5 Project Area History

When Mexico became independent from Spain in 1821, the area north of San Diego became the Mexican province of Alta California. Land grants for large cattle ranches were issued in other parts of Alta California, but no land grants were issued in the southern San Joaquin Valley during the Mexican Period (1821 to 1848). The Yokuts raided coastal ranches to obtain horses for food and for riding. Over 75 percent of the native population died as a result of European diseases in the 1830s. During the American Period (1848 to present) the remnant population lived on the Fort Tejon Reservation in the 1850s and at the Tule River Reservation beginning in the 1870s (Wallace 1978).

After California became a state in 1850, Tulare County was created in 1852. Early Tulare County included what is now Kern County. Economic activity in what would become Kern County during the early part of the American period consisted mostly of mining in the eastern mountains and desert. There was a gold rush to the upper Kern River area in 1855. Mining communities in this area included Keyesville and Greenhorn. Gold was discovered in Havilah Canyon (south of Kern River) in 1864 and the town of Havilah was platted in 1865 (RootsWeb 2011). Kern County was formed in 1866 and Havilah was made the county seat.

The western valley portion of Kern County was seen as partly arid wasteland and partly swampy. In order to make agriculture possible, the swamps needed to be drained and the arid areas between the swamps and the mountains needed to be irrigated. The federal government ceded the swamp and overflowed lands in the state to the State of California in 1850 (Robinson 1948:191). In 1857, the state passed the Swamp Land Act. As a result, the state granted 89,000 acres of swamp land in Kern and Tulare counties to W. F. Montgomery and his partners, on the condition that they reclaim (drain) it. Montgomery and his partners sold the swampland franchise to Colonel Thomas Baker and Harvey S. Brown (Comfort 1934). Col. Baker began draining the swampland around the Kern River in 1863 (Historical Society n.d.). However, in

1868 there was a major flood that inundated all the land that Baker had drained. Based on the lack of reclamation as required by the state grant, the Twelfth District Court in 1878 voided the grant of land from the state to Montgomery that had passed to Baker. However, they ruled that the land sales from Baker to others were valid, if the new owners had spent money on reclamation of their land, had built fences, and made other improvements (Comfort 1934).

Bakersfield began as Baker's field, a fenced property with a corral owned by Colonel Thomas Baker at Kern Island on the Kern River (Gudde 1969:19). The first settler at this location was Christian Bohn in 1860. Baker's field developed into the town of Bakersfield where Baker built a grist mill in 1868. A school and post office were established in 1869. The county seat of Kern County was moved from Havilah to Bakersfield in 1874 and a bank opened in Bakersfield that same year (Historical Society n.d.).

Agricultural development of the southern San Joaquin Valley northwest of Bakersfield was based on water coming from rivers and drainages that originated on the western slopes of the Sierra Nevada Mountains. When a railroad was built to connect San Francisco and Los Angeles, the route went through the eastern side of the southern San Joaquin Valley so that the farmers in the area could ship their produce and receive supplies via railroad. The Central Pacific Railroad built a rail line south through the San Joaquin Valley from its transcontinental line (San Francisco to Ogden, Utah) at Lathrop. The line south from Lathrop reached Goshen (south of Fresno) in 1872. The Southern Pacific Railroad, which had the same ownership as the Central Pacific, continued construction of the line south and reached Bakersfield in 1874. The line was completed to Los Angeles via Tehachapi and Lancaster in 1876 (Robertson 1998).

A series of towns formed along the railroad. In Kern County, these included Delano and McFarland. A second railroad was built through the east side of the San Joaquin Valley to compete with the Southern Pacific. The San Francisco and San Joaquin Valley (SF&SJV) Railroad was completed from San Francisco to Bakersfield in 1898. The SF&SJV Railroad was purchased by the Atchison, Topeka, & Santa Fe (AT&SF) Railroad in 1901, completing the AT&SF Railroad transcontinental route from Kansas City to San Francisco (Robertson 1998). In Kern County, the towns of Wasco and Shafter formed along the AT&SF Railroad.

The west side of the southern San Joaquin Valley was slow to develop because of a lack of water for agriculture. Water for irrigation in this area may not have been available until the second half of the twentieth century. Land in the Antelope Plain was originally owned by Texaco and Mobil Oil, as well as Dole Foods (Arax 2003). The oil companies held the land for oil exploration, rather than agriculture. Dole may have carried out agriculture, but water was limited. Much of the land in the Antelope Plain is now owned by Paramount Farms, the largest producer of almonds and pistachios in the world. Paramount Farms obtains much of their water from the State Water Project (California Aqueduct) and the Kern Water Bank (Arax 2003). The California Aqueduct was completed in 1970 (California Department of Water Resources [DWR] 2008), and the Kern Water Bank was organized in 1994 (Arax 2003).

The City of Taft began as the Sunset Railway Company Siding Number Two. The Sunset Railway Company built a spur from Gosford on the Southern Pacific Railroad main line west of Bakersfield to Pentland and Hazelton in 1901. The line was extended from Pentland to Taft in 1909 to provide access to the local oil fields. The Sunset Railway was leased to the Southern Pacific Railroad in 1910 (Robertson 1998). Residents of the area around what is now Taft requested that the railroad name their community Moro; however, to

avoid confusion with Morro Bay, the railroad named the depot, and the subdivision north of it, Moron. In 1909, the area south of the depot was named in honor of U.S. President William Howard Taft. The two areas merged in 1912 under the Taft name (Nickell 2014; Taft Chamber of Commerce 2018). Today, Taft lies at the center of the Midway Sunset Oilfield, the largest oilfield in California. The first oil was pumped from Midway Sunset Oilfield in 1894 and has operated continuously since then (Gordon and Wojcicki 2017). The population of the City of Taft is nearly 10,000, with a population of 19,000 in the Greater Taft area (Taft Chamber of Commerce 2018).

4.0 METHODS

4.1 Personnel Qualifications

All phases of the cultural resource investigation were conducted under the supervision of Senior Archaeologist John O'Connor, Ph.D., Registered Professional Archaeologist (RPA). Fieldwork was conducted by Dr. O'Connor and Assistant Archaeologist Paige Liss. Ms. Liss also prepared this technical report under the supervision of Dr. O'Connor. Senior Archaeologist Wendy Blumel, M.A., RPA also contributed to this report.

John O'Connor, Ph.D., is the Southern California Cultural Resources Manager for ECORP with more than 10 years of archaeological experience in North America and the Pacific Islands. Dr. O'Connor is a RPA who meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology. Dr. O'Connor has expertise in all facets of archaeological practice, including cultural resources management, academic research, museum collections management, university teaching, and applied knowledge of inter-institutional coordination with American Indian and Native Hawaiian organizations.

Paige Liss is an Assistant Archaeologist for ECORP and has more than three years of experience in cultural resources management, primarily in southern California. She holds a B.S. in Anthropology and Geography with a concentration in Human Ecology. Ms. Liss has participated in and supervised numerous surveys and data recovery excavations for both pre-contact and historic sites on federal, state and local projects, and has cataloged, identified, and curated hundreds of artifacts. She has conducted numerous evaluations of cultural resources for eligibility for the NRHP.

Wendy Blumel, RPA, is the Assistant Southern California Cultural Resources Manager for ECORP and meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeologist. Ms. Blumel has 11 years of experience in cultural resources management and is experienced in the organization and execution of field projects in compliance with Section 106 of the NHPA and CEQA. She has contributed to and authored numerous cultural resources technical reports, research designs, and cultural resources management plans, and has contributed to a variety of environmental compliance documents.

4.2 Records Search Methods

A cultural resources records search was requested by ECORP from the Southern San Joaquin Valley Information Center (SSJVIC), located at California State University, Bakersfield. The records search was

completed on October 4, 2019 by Celeste M. Thompson, coordinator at the SSJVIC. The purpose of the records search was to determine the extent of previous cultural resource investigations and the presence of previously recorded archaeological sites or historic-period (i.e., over 50 years in age) resources within a one-mile (1,600-meter) radius of the Project Area. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the NRHP, CRHR, California Points of Historical Interest, California Landmarks, and National Historic Landmarks.

Historic maps reviewed include:

- 1910 USGS Buena Vista Lake topographic quadrangle map (1:125,000 scale)
- 1950 USGS Taft, California topographic quadrangle map (1:24,000 scale)

Historic aerial photos taken in 1968, 1994, 2005, and 2010 (NETROnline 2018) were also reviewed on October 24, 2019 by Paige Liss, for any indications of property usage and built environment. The local historical registry was reviewed, and no historical resources were found within one mile of the Project Area.

4.3 Sacred Lands File Coordination Methods

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) in September 2019 to request a search of the Sacred Lands File for the Project Area (Attachment B). The search was requested to determine whether or not Sacred Lands have been recorded by California Native American tribes within the Area, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The NAHC also provided a list of Native American groups that have historic or traditional ties to the Project Area.

4.4 Field Methods

Archaeological fieldwork was conducted by ECORP archaeologists John O'Connor, Ph.D., RPA and Paige Liss on October 17 and October 18, 2019, and consisted of an intensive systematic pedestrian survey. The Project Area was examined for the presence of cultural artifacts and features by walking the 60-acre Project Area, using parallel east-west transects spaced 15 meters apart. Notes and photographs were taken on the environmental setting and disturbances within the Project Area. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

Newly discovered cultural resources would be assigned a unique temporary number based on the Project name and the order in which they were found (i.e., ZG-002). As appropriate, the site boundary, features, and artifacts would be mapped using Collector for ArcGIS, a cloud-based geospatial software with 2 to 5-meter accuracy, with data later post-processed for submeter accuracy. Digital photographs were taken of select artifacts and features as well as general site overviews showing the general environment and the

presence, if any, of human or naturally-occurring impacts. Following fieldwork, Department of Parks and Recreation (DPR) 523 records would be prepared for any resources identified and location and sketch maps would be created using data collected with the Collector ArcGIS application used in the field.

4.5 Archival Research Methods

ECORP archaeologist Paige Liss undertook archival research in order to evaluate cultural resources found during this study for the CRHR. Archival research was used to identify the history of the finds and to determine if they are associated with important persons or events in local history. Sources included historic-period aerial photographs, maps, compiled histories of oil exploration/extraction in the region, and the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) well finder and well records search.

5.0 RESULTS

5.1 Records Search

The records search results, received on October 4, 2019, consisted of a review of previous research and literature, records on file with the SSJVIC for previously recorded resources, historical aerial photographs, and maps of the vicinity. Confirmation of the SSJVIC records search can be found in confidential Attachment A.

5.1.1 Previous Research

The records search indicated that the Project Area had been previously surveyed for cultural resources multiple times, however, the extent of the surveys is unknown. A report did state that the main rectangular portion of the Project Area had only been surveyed in 1977 by what was termed a "General Surface Reconnaissance." During these surveys, no cultural resources were identified within the Project Area. Because these studies were conducted at different times, by different consultants, as many as 42 years ago under obsolete standards, a pedestrian survey of the Project Area was conducted for the current Project.

Seven previous cultural resources investigations have been conducted within the Project Area between 1977 and 2012. Nineteen additional cultural resources investigations were conducted within the one-mile records search radius between 1988 and 2001. Details of all 26 investigations are presented below in Table 1. These studies revealed the presence of pre-contact sites, including lithic scatters and habitation sites, and historical sites, including sites associated with historic mining activities located in the vicinity of the Project Area.

Table 1. Previous Cultural Studies In or Within 1 Mile of the Project Area

Report Number	Author(s)	Report Title	Year	Includes Portion of the Project Area?
KE-00318	Chavez, David	Cultural Resources Evaluation of New Production Activity Locations at Elk Hills Naval Petroleum Reserve No. 1, Tupman, Kern County, California	1977	**Yes**
KE-00321	Chavez, David	FINAL REPORT: Cultural Resources Evaluation of the Natural Gas Liquid (NGL) Pipeline Route, Natural Gas Liquid Railroad Facilities, and the Associated Spur Line, Naval Petroleum Reserve No. 1 (Elk Hills), Kern County, California	1979	**Yes**

Table 1. Previous Cultural Studies In or Within 1 Mile of the Project Area

Report Number	Author(s)	Report Title	Year	Includes Portion of the Project Area?
KE-00405	Garcia, Juanita	An Archaeological Assessment of 41 Soil Pits Located on the Elk Hills Naval Petroleum Reserve No. 2 Near Taft, Kern County, California	1992	No
KE-00758	Osborne, Richard H.	An Archaeological Assessment of 6.76 Acres East of Ford City Within the Elk Hills Naval Petroleum Reserve No. 2, Kern County, California	1990	No
KE-00959	Pruett, Catherine Lewis and Acker, Karen	Environmental Impact Evaluation: An Archaeological Survey of the 8-D Vacuum Gas Line Replacement near Taft for Chevron U.S.A., Inc.	1988	No
KE-01356	Schiffman, Robert A.	Archaeological Investigation for Texaco USA's Pipeline Repair Project Elk Hill Naval Petroleum Reserve Number 2, Kern County, California	1989	No
KE-01357	Schiffman, Robert A.	Archaeological Investigation for Texaco USA's Re-Routing of a Gas Gathering Pipeline on Section 8, T32S/R24E Buena Vista Hills Field, USL SAC #019343, Kern County, California	1990	No
KE-01361	Schiffman, Robert A.	Archaeological Resources Investigation of Section 8, Township 32S., Range 24E. Buena Vista Hills, Kern County, California	1990	No
KE-01362	Schiffman, Robert A.	Archaeological Resources Investigation for Section 6, Township 32S.; Range 24E. Buena Vista Hills, Kern County, California	1990	No
KE-01409	Schiffman, Robert A.	Archaeological Investigation of Two Waste Disposal Sites Section 8, Township 32S., Range 24E. Buena Vista Hills, Kern County, California	1991	No
KE-01508	Scott, David	An Archaeological Assessment of 2.3 Acres of Land Near Taft, Kern County, CA	1991	No
KE-01512	Scott, David	An Archaeological Assessment of Approximately 167 Acres on the Naval Petroleum Reserve, Kern County, CA	1992	**Yes**
KE-01814	Yohe II, Robert M.	An Archaeological Assessment of Five Proposed Fence Line Routes, Ford City, Kern County, California	1990	No
KE-01914	Scott, David J.	Archaeological Testing at CA-KER-3161, Taft, Kern County, California	1993	No
KE-01999	Schiffman, Robert A.	Archaeological Investigation of Proposed Pipeline 408 West Kern Water District, Kern County, California	1992	No
KE-02010	Alcock, Gwyn and Parr, Robert	Archaeological Inventory of the Chevron/Santa Fe Midway Valley 3D Seismic Survey Project, Kern and San Luis Obispo Counties, CA	1997	**Yes**
KE-02868	Culleton, Brendan J. and Jackson, Thomas L.	Cultural Resources Inventory and Evaluation for the Nuevo Energy Natural Gas Pipeline	2004	No
KE-03036	Jackson, Thomas L. and O'Neill, Mary M.	Cultural Resources Inventory and Evaluation for United States Department of Energy Naval Petroleum Reserve No. 2 (NPR-2), Ford City Subsidence Area Soils Sampling and Related Activities, Ford City, California	2005	No
KE-03056	Jackson, Thomas and O'Neill, Mary	Cultural Resources Inventory and Evaluation for Abandonment and Closure of Ten Idle Oil Production Wells, United States Dept of Energy Naval Petroleum Reserve No. 2 (NPR- 2), Taft, CA	2005	No
KE-03318	Hudlow, Scott	A Phase I Cultural Resource Survey for Sanduphor Enterprises, Cedar Road Project, City of Taft, CA	2006	**Yes**
KE-03921	Whitley, Tamara	Cultural Resource Inventory Report Occidental of Elk Hills 8/15/08 APD's	2008	No
KE-04381	Whitley, David S. and Comeau, Brad	Class III Inventory of 2,560 Acres Comprising all or Portions of Sections 5,6, and 8 and Sections 25 and 26, Buena Vistal Hills, Kern County, California	2011	**Yes**
KE-04413	Andrews, Sherri and Whitley, David S.	Class III Inventory of 4,510 Acres Comprising All or Portions of Section 6R, 26Z, 6B, 22B and 34B, 12C, and 7D, 9D, and 14D, Kern County, California	2012	**Yes**
KE-04626	Bell, Arran, Kaldenberg, Russell, and Andrews, Sherri	Class III Inventory of 3,840 Acres Comprising All of Sections 2D, 4D, 12D, 18H, 31G, 32G, and Portions of Sections 5D and 9D, Kern County, California	2014	No
KE-04651	Carey, Peter and Rizzi, Jena	Class III Inventory, Vintage Well Pad 5-3- 18D, and NRHP Eligibility Evaluation for Site CA-KER-2582H, Midway Valley, Kern County, California	2014	No

Table 1. Previous Cultural Studies In or Within 1 Mile of the Project Area

Report Number	Author(s)	Report Title	Year	Includes Portion of the Project Area?
KE-05122	Bell, Arran and Whitley, David S.	FINAL Class III Inventories of Portions of the Buena Vista Hills, Kern County, California	2014	No

The records search also determined that 67 previously recorded pre-contact and historic-era cultural resources are located within one mile of the Project Area (Table 2). Of these, two are associated with Native American activities, 64 are historic-era sites associated with early Euroamerican ranching and oil mining activities, and one contains evidence of both pre-contact and historic-era resources. None of these resources are located within the Project Area.

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
CA-KER-002582H	P-15-002582	1989 (K. McGuire, et al., Far Western Anthropological Research Group, Inc.); 2014 (Colin Rambo, ASM Affiliates)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-002929H	P-15-002929	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1996 (Hubert Switalski, Krista Moreland, Center for Archaeological Research, California State University, Bakersfield); 2009 (K. Larsen, A. Nicchitta, S. Mellinger, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, L. Draucker, C. Whitley, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-002988H	P-15-002988	1990 (Robert M. Yohe II, Cultural Resource Facility, California State University, Bakersfield); 1996 (Gwyn Alcock, Susan Wolfe, Matt Des Lauriers, Center for Archaeological Research, California State University, Bakersfield); 2004 (M. O'Neill, Pacific Legacy, Inc.); 2009 (S. Mellinger, A. Stevenson, L. MacDonald, K. Larsen, A. Nicchitta, M. Armstrong, M. Walton, P. Sharp, Pacific Legacy, Inc.); 2011 (S. Andrews, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-002998H	P-15-002998	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Hubert Switalski, Center for Archaeological Research, California State University, Bakersfield); 2009 (N. Sims, C. Davis, J. Sprague, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-002999H	P-15-002999	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (J. Sprague, C. Davis, N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH9. Mines/Quarries/ Tailings	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
CA-KER-003000H	P-15-003000	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, J. Sprague, C. Davis, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003001H	P-15-003001	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH9. Mines/Quarries/ Tailings	No
CA-KER-003002H	P-15-003002	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003003H	P-15-003003	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003004H	P-15-003004	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003005H	P-15-003005	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (M. Armstrong, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003006H	P-15-003006	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Gwyn Alcock, Hubert Switalski, Lori Wear, Center for Archaeological Research, California State University, Bakersfield); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-003007H	P-15-003007	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Hubert Switalski, Lori Wear, Center for Archaeological Research, California State University, Bakersfield); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-003008H	P-15-003008	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (K. Larsen, P. Sharp-Garcia, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C.	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
		Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)			
CA-KER-003009H	P-15-003009	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Krista Moreland, Loris Wear, Center for Archaeological Research, California State University, Bakersfield); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003010H	P-15-003010	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, C. Davis, J. Sprague, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003011H	P-15-003011	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH9. Mines/Quarries/ Tailings	No
CA-KER-003012H	P-15-003012	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (J. Sprague, C. Davis, N. Sims, Pacific Legacy, Inc.); 2013 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003013H	P-15-003013	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2005 (M.M. O'Neill, Pacific Legacy, Inc.); 2009 (J. Sprague, C. Davis, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-003014H	P-15-003014	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (M. Armstrong, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003015H	P-15-003015	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (M. Armstrong, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003016H	P-15-003016	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003017H	P-15-003017	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (M. Armstrong, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
CA-KER-003018H	P-15-003018	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (P. Sharp-Garcia, A. Nicchitta, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH9. Mines/Quarries/ Tailings	No
CA-KER-003019H	P-15-003019	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (A. Stevenson, K. Larsen, P. Sharp-Garcia, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003020H	P-15-003020	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2005 (M.M. O'Neill, Pacific Legacy, Inc.); 2009 (M. Armstrong, K. Larsen, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/Quarries/Tailings	No
CA-KER-003021H	P-15-003021	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Hubert Switalski, Lori Wear, Center for Archaeological Research, California State University, Bakersfield); 2009 (J. Sprague, C. Davis, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/ Dumps/ Trash Scatters; AH16. Other	No
CA-KER-003022H	P-15-003022	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1996 (Gwyn Alcock, Jill Gardner, Center for Archaeological Research, California State University, Bakersfield); 2009 (J. Sprague, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters; AH16. Other	No
CA-KER-003023H	P-15-003023	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003024H	P-15-003024	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (P. Sharp-Garcia, A. Stevenson, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003025H	P-15-003025	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (P. Sharp-Garcia, A. Nicchitta, K. Larsen, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo,	Historic	AH4. Privies/Dumps/Trash Scatters	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
		C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)			
CA-KER-003026H	P-15-003026	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1996 (Lori Wear, Jill Gardner, Gwyn Alcock, Center for Archaeological Research, California State University, Bakersfield); 2009 (N. Sims, J. Sprague, C. Davis, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003027/H	P-15-003027	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Krista Moreland, Hubert Switalski, Center for Archaeological Research, California State University, Bakersfield); 2009 (J. Sprague, C. Davis, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.); 2011 (Michelle Dalope, Kent Smolik, ASM Affiliates, Inc.)	Pre-contact, Historic	AH2. Foundations/ Structure Pads; AH3. Landscaping/Orchard; AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings; AP16. Other	No
CA-KER-003034H	P-15-003034	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 1997 (Lori Wear, Hubert Switalski, Center for Archaeological Research, California State University, Bakersfield); 2009 (J. Sprague, C. Davis, N. Sims, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-003044H	P-15-003044	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (A. Nicchitta, P. Sharp-Garcia, A. Stevenson, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, d. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003045H	P-15-003045	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (N. Sims, M. Armstrong, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003046H	P-15-003046	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003047H	P-15-003047	1990 (Robert A. Schiffman, Stephen B. Andrews, Bakersfield College); 2009 (J. Sprague, C. Davis, N. Sims, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-003161	P-15-003161	1992 (David J. Scott, Shannon Harris, Lori Wear, Sharynn-Marie Valdez, Cultural Resource Facility,	Pre-contact	AP2. Lithic Scatter	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
		California State University, Bakersfield)			
Isolate	P-15-004193	1988 (John W. Hohman, Louis Berger and Associates, Inc.)	Historic	AH16. Other	No
Isolate	P-15-004194	1988 (John W. Hohman, Louis Berger and Associates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
Isolate	P-15-004195	1988 (John W. Hohman, Louis Berger and Associates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-005203H	P-15-006286	1996 (Gwyn Alcock, Susan I. Wolfe, Matthew Des Lauriers, Center for Archaeological Research, California State University, Bakersfield)	Historic	AH4. Privies/Dumps/Trash Scatters; AH16: Other	No
CA-KER-005209H	P-15-006292	1996 (Gwyn Alcock, Hubert Switalski, Jill Gardner, Center for Archaeological Research, California State University, Bakersfield)	Historic	AH4. Privies/Dumps/Trash Scatters; AH16: Other	No
Isolate	P-15-010958	2003 (Brendan Culleton, Pacific Legacy, Inc.); 2009 (M. Armstrong, N. Sims, Pacific Legacy, Inc.)	Pre-contact	AP2. Lithic Scatter	No
N/A	P-15-011495	2005 (M. O'Neill, Pacific Legacy); 2009 (N. Simms, M. Armstrong, Pacific Legacy)	Historic	AH2. Foundations/ Structure Pads; AH16. Other	No
N/A	P-15-011496	2005 (M. O'Neill, Pacific Legacy); 2009 (K. Larsen, M. Armstrong, Pacific Legacy)	Historic	AH2. Foundations/ Structure Pads; AH16. Other	No
CA-KER-008255H	P-15-014688	2011 (Riordan Goodwin, Carl Bennett, LSA Associates, Inc.)	Historic	AH2. Foundations/ Structure Pads	No
CA-KER-008273H	P-15-014707	2011 (Riordan Goodwin, Carl Bennett, LSA Associates, Inc.)	Historic	AH2. Foundations/ Structure Pads	No
CA-KER-008520H	P-15-015398	2009 (A. Nicchitta, A. Stevenson, P. Sharp-Garcia, Pacific-Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
Isolate	P-15-015399	2009 (A. Nicchitta, A. Stevenson, K. Larsen, P.K. Sharp-Garcia, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-008521H	P-15-015400	2009 (J. Sprague, Pacific Legacy, Inc.); 2011 (B. Comeau, J. Malamma, C. Rambo, C. Whitley, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-008522H	P-15-015401	2009 (C. Davis, J. Sprague, N. Sims, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
N/A	P-15-015447	2009 (M. Walton, M. Armstrong, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-008563H	P-15-015465	2009 (K. Larsen, N. Sims, A. Stevenson, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-008569H	P-15-015472	2009 (A. Nicchitta, A. Stevenson, K. Larsen, P.K. Sharp-Garcia, Pacific Legacy, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009445H	P-15-017258	2013 (B. Comeau, C. Whitley, J. Malamma, C. Rambo, G. Morgan, ASM Affiliates, Inc.)	Historic	AH16. Other	No
CA-KER-009446H	P-15-017259	2011 (B. Comeau, C. Whitley, J. Malamma, C. Rambo, G. Morgan, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009447H	P-15-017260	2011 (B. Comeau, C. Whitley, J. Malamma, C. Rambo, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH2. Foundations/ Structure Pads	No
CA-KER-009448H	P-15-017261	2011 (B. Comeau, C. Whitley, J. Malamma, C. Rambo, G. Morgan, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009449H	P-15-017262	2011 (B. Comeau, C. Whitley, J. Malamma, C. Rambo, D. McKenzie, ASM Affiliates, Inc.)	Historic	AH15. Standing Structures	No

Table 2. Previously Recorded Cultural Resources Within 1 Mile of the Project Area

Site Number CA-XXX-	Primary Number P-XX-	Recorder and Year	Age/ Period	Site Description/ Attribute Codes	Within Project Area?
CA-KER-009614H	P-15-017452	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH2. Foundations/ Structure Pads; AH9. Mines/ Quarries/Tailings; AH10. Machinery	No
CA-KER-009615H	P-15-017453	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009616H	P-15-017454	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009617H	P-15-017455	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No
CA-KER-009618H	P-15-017456	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH2. Foundations/ Structure Pads; AH4. Privies/Dumps/Trash Scatters	No
CA-KER-009619H	P-15-017457	2012 (S. Andrews, C. Rambo, R. Azpitarte, S. Escamilla, P. O'Neill, R. Sheehan, ASM Affiliates)	Historic	AH4. Privies/Dumps/Trash Scatters; AH9. Mines/ Quarries/Tailings	No

5.1.2 Records

The Office of Historic Preservation's *Directory of Properties, Historic Property Data File* (dated December 18, 2012) indicated that no resources were listed within the Project Area.

The National Register Information System (National Park Service [NPS] 2019) failed to reveal any eligible or listed properties within the Project Area. The nearest National Register property is located over two miles to the southwest of the Project Area in the City of Taft.

5.1.3 Map Review and Aerial Photographs

The review of historical aerial photographs and maps of the Project Area provide information on the past land uses of the property and potential for buried archaeological sites. Based on this information, the Project Area has been an undeveloped, relatively flat area used as an oil field from at least 1968 to the present. Following is a summary of the review of historical maps and photographs.

The earliest USGS Buena Vista Lake Topographic Quadrangle (scale 1:125,000) maps show that there was a single dirt road and no dwellings in the Project vicinity in the early 20th century (USGS 1910). The 1950 USGS Taft, CA Topographic Quadrangle map shows Southern Calif Gas Camp south of the Project Area, and an unnamed, unpaved road located near the north boundary of the Project Area, as well as a series of wellheads located south of the unnamed road (USGS 1950). The community of Taft is depicted southeast of the Project Area, and the community of Ford City is depicted north of Taft (USGS 1950). The USGS maps provided post 1950 have not changed since the 1950 one for the Project Area. Development in the area of Taft is shown to have now extended to the south, west, and to the north, connecting Taft and Ford City (USGS 1981). Historic Aerial photographs do not show much change in the Project Area. Between 1968 and 1994, the only apparent activity was the widening of dirt roads already crossing the Project Area.

5.2 Sacred Lands File Results

The results of the Sacred Lands File by the NAHC were received on September 25, 2019 and did not indicate the presence of any documented Native American Sacred Lands within one mile of the Project Area. The NAHC also provided a list of 13 Native American groups that have historic or traditional ties to the Project Area who may have knowledge about the Project Area. It should be noted that this does not constitute consultation in compliance with SB 18 or AB 52. A copy of all correspondence between ECORP and the NAHC is provided as Attachment B.

5.3 Field Survey Results

ECORP surveyed the 60-acre Project Area for archaeological and built environment resources on October 17, 2019 and October 18, 2019. The 60-acre Project Area is undeveloped and located on the northeastern boundary of the City of Taft. The areas to the north and east of the Project Area remain undeveloped. The western and southern boundaries of the Project Area are adjacent to Farmer Vacuum Services, Inc. and the Taft City Animal Shelter. Airport Road forms the northwest boundary of the Project Area, and Gas Company Road forms the east boundary. The area is relatively flat, slightly sloping to the south, and a network of dirt roads pass through, connecting Airport Road with Gas Company Road. Vegetation consisted of relatively low-lying seasonal grasses with a few larger saltbushes (Figure 3). At the time of the cultural resources survey, ground visibility was good (about 60 to 80 percent) across the Project Area. During the field survey, one historic-era site, three pre-contact isolates, and two historic-era isolates were identified. Further descriptions are provided below.

Figure 3. Project Area Overview (view southwest) (IMG_0716), 10/17/2019, Accession #12

5.3.1 Cultural Resources

During the survey, the crew encountered one historic-era site, three pre-contact isolates, and two historic-era isolates (Table 3). Site descriptions follow, and confidential DPR site records are provided in Attachment D.

Table 3. Newly Recorded Cultural Resources Within the Project Area

Resource Name or #	Type	Site Description	Age/ Period
ZG-002-I	Isolate	Lithic Core	Pre-Contact
ZG-003-I	Isolate	Diagnostic Glass Base	Historic
ZG-004	Site	Oil Mining Features	Historic
ZG-005-I	Isolate	Diagnostic Glass Base	Historic
ZG-007-I	Isolate	Unifacial Lithic Flake	Pre-Contact
ZG-008-I	Isolate	Possible Lithic Projectile Point Fragment	Pre-Contact

ZG-002-I

The isolate consists of a single edge-modified lithic core. The core measures 5cm x 4cm x 1.5cm (Figure 4). The material is a reddish-brown mottled cryptocrystalline silicate (CCS). The core contains nine major flake scars, with six edges showing utilization and one edge that shows unifacial pressure flaking (measures

3cm). The isolate was located on a graded dirt patch, approximately 5 meters to the north of a paved road.

Figure 4. Overview of ZG-002-I: CCS Core, (View: West) (IMG_0710), 10/17/2019, Accession #6

ZG-003-I

The isolate consists of a single historic-period diagnostic glass base (Figure 5). The glass base is brown in color with an Owens-Illinois makers mark and a date of 1946. The base measures 2 14/16 inches. The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project Area.

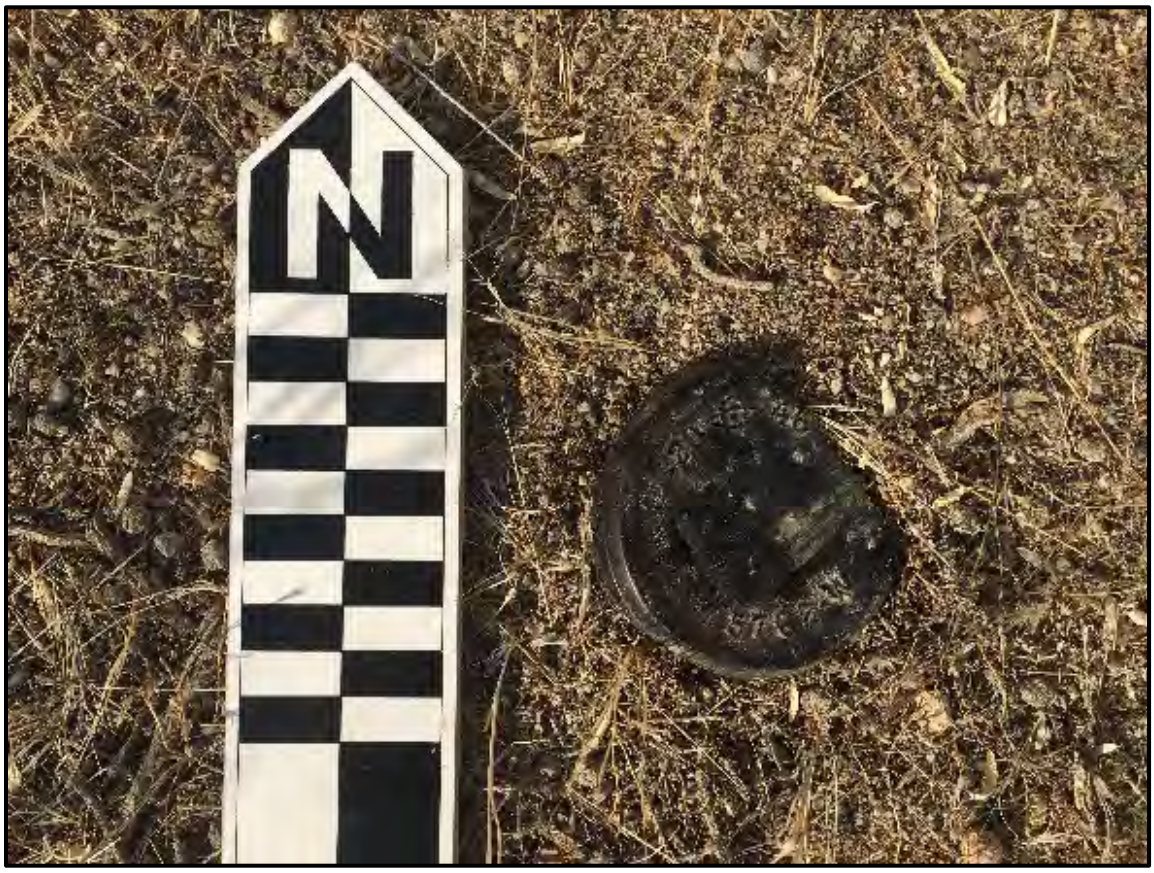

Figure 5. Overview of ZG-003-I: Glass Bottle Base, (View: North) (IMG_0717), 10/17/2019, Accession #13

ZG-004 Historic-Period Oil Features

ZG-004 consists of a set of features that are associated with the historic-period oil mining of the property. These consist of six wellheads with associated pipes and a valve, a wood-lined pit, and a cyclone separator. The site is in good condition; however, multiple OHV (off-highway vehicle) tracks run through the site and there is evidence of modern maintenance/upkeep on several of the features.

Wellheads. The wellheads are first denoted on the USGS Taft, CA topographic map dating to 1950. The site contains six wellhead features, all connected across the site by a series of underground pipes. Historical maps and records indicate that nine wellheads were previously located on the property. Based on information obtained from the DOGGR, wells drilled within the Project Area were historically designated by the Standard Oil Co. as well numbers 1, 36, 37, 38, 40, 69, 70, 75, and 269. The wells have changed designation numbers with changes in ownership. However, for ease of reading, the historic numbers will be used throughout this report.

During the field survey the archaeologists identified six wellheads within the Project area. Based on information from the DOGGR, these identified wellheads likely correspond to well numbers 1, 37, 38, 75, and 69. In addition, one wellhead identified during the survey could not be assigned to a particular well number. This may correspond to historic-period well 70. Wells on the property that were not found during the survey include well 36, 40, and 269. The wellheads associated with these three wells may have been removed at the time they were plugged or have been damaged or buried.

Wellhead 1. The wellhead for well 1 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. The feature is mostly buried, unlike the others that extend approximately a foot above the ground surface. This wellhead was also in the worst condition, with a broken valve handle. The exposed portion of the pipe and wellhead measures 10in diameter by 6in high.

Wellhead 37. The wellhead for well 37 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. Within 15 feet of the well, a shard of amethyst glass and a few crushed cans, mostly bi-metal flat tip with interlocking side seam (not measurable), were found. The exposed portion of the pipe and wellhead measures 3ft by 3ft by approximately 2in high.

Wellhead 38. The wellhead for well 38 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. The exposed portion of the pipe and wellhead measures 7ft by 2ft by 1.5ft high.

Wellhead 69. The wellhead for well 69 is located approximately 30 feet to the west of Gas Company Road. The exposed portion of the pipe and wellhead measures 1ft by 2ft by 2.5ft high.

Wellhead 75. The wellhead for well 75 was designated as 75-2 in the DOGGR data. The exposed portion of the pipe and wellhead measures 1ft by 6in by 2.5ft high. A partially buried pipe and valve were noted approximately 50-feet to the west of well 75-2.

Undesignated well. During the survey, a wellhead was located approximately 50 feet to the southwest of well 37. This particular wellhead is not marked on any maps. This wellhead location included a pad of

concrete located 10 feet to the west of the metal pipe-head. It is unclear if this pad is historic in age, and it was not recorded as a feature. The exposed portion of the pipe and wellhead measures 6ft by 6in high.

Figure 6. Overview of ZG-004: Feature WH75-2, (View: North) (IMG_0728), 10/18/2019, Accession # 22

Wood-lined pit. This feature consists of a historic-period wood-lined pit, likely an oil drilling related feature. The feature measures 6ft (N/S) by 6ft (E/W) by 3.5ft deep (Figure 7). The four sides of the pit are constructed with wooden planks and round nails. The pit is partially filled in with local soil/sand and plants. Surrounding the feature were rusted round nails, rusted miscellaneous metal fragments, fragmented pipes, glass shards (olive, clear, amethyst colored), wood and brick fragments, as well as patches of cement and asphalt with large conglomerates. This pit is located less than 30 meters from well 1.

Figure 7. Overview of ZG-006: (View: North) (IMG_0723), 10/17/2019, Accession #18

Cyclone Separator and attached pipes. This feature consists of a cyclone separator with two associated vertical pipes and two associated signposts located in the southwestern corner of the Project Area (Figure 8). The separator measures 5ft x 5ft x approximately 15ft high. The cyclone separator has a modern sticker label placed on it that has a barcode and reads "Cyclone Separator 175184". What appear to be new aluminum parts added to the cyclone separator and pipes are present. The separator, pipes, and signposts are all painted the same light green color and are heavily rusted. The signposts read "No Smoking" and "Gauge Setting West Section 17D." The pipes connected to the six wellheads described above all seem to be leading to this cyclone separator. Many of the metal pipes and levers attached to the separator have been disabled, and the separator and pipes appear to no longer be used.

Figure 8. Overview of ZG-009: Cyclone Separator, (View: Northwest) (IMG_0736), 10/18/2019, Accession #29

ZG-005-I

The isolate consists of a single historic-period diagnostic glass bottle base. The glass bottle base is brown in color and, although it is fragmented, an Owens-Illinois makers mark is visible (Figure 9). The fragmented base measures 1 12/16". Some shards of non-diagnostic clear and dark blue glass were also found in the close vicinity. The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project Area.

Figure 9. Overview of ZG-005-I: Glass Bottle Base, (View: North) (IMG_0720), 10/17/2019, Accession #15

ZG-007-I

The isolate consists of a single edge modified unifacial flake (Figure 10). The flake measures 3.5cm length x 2.5cm height x 1.5cm width. The material is a reddish-brown mottled CCS. The isolate was located on a graded dirt trail, less than one meter to the east of a modern fence separating the Project Area from the Waste Disposal Plant to the west.

Figure 10. Overview of ZG-007-I: CCS Flake, (View: North) (IMG_0731), 10/18/2019, Accession #25

ZG-008-I

The isolate consists of a single possible projectile point fragment (Figure 11). The point measures 3.5cm length x 2cm height x 1.5cm width. The material is a clear/pink CCS with small crystal structures forming the base. The point exhibits utilization on both edges and is bifacially modified. The isolate was located on a patch of pushed asphalt, likely washed down from an unknown source upslope.

Figure 11. Overview of ZG-008-I: CCS Flake, (View: south, arrow points north) (IMG_0732), 10/18/2019, Accession #27

6.0 EVALUATION OF ELIGIBILITY

6.1 State Evaluation Criteria

Under state law (CEQA) cultural resources are evaluated using CRHR eligibility criteria in order to determine whether any of the sites are Historical Resources, as defined by CEQA. CEQA requires that impacts to historical resources be identified and, if the impacts would be significant, that mitigation measures to reduce the impacts be applied.

A Historical Resource is a resource that:

1. is listed in or has been determined eligible for listing in the CRHR by the State Historical Resources Commission;

2. is included in a local register of historical resources, as defined in PRC 5020.1(k);

3. has been identified as significant in a historical resources survey, as defined in PRC 5024.1(g); or

4. is determined to be historically significant by the CEQA lead agency [CCR Title 14, § 15064.5(a)].

In making this determination, the CEQA lead agency usually applies the CRHR eligibility criteria.

For this Project, only the fourth definition of a historical resource is applicable because there are no resources previously determined eligible or listed on the CRHR, there are no resources included in a local register of historical resources, and no resources identified as significant in a qualified historical resources survey.

The eligibility criteria for the CRHR are as follows [CCR Title 14, § 4852(b)]:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, § 4852(c)].

Historical buildings, structures, and objects are usually eligible under Criteria 1, 2, and 3 based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion 4, the potential to yield information important in prehistory or history. An archaeological test program may be necessary to determine whether the site has the potential to yield important data. The CEQA lead agency makes the determination of eligibility based on the results of the test program.

Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR.

Impacts to a historical resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, § 15064.5(a)].

6.2 CRHR Evaluations

Isolated Finds. Two historic-period and three pre-contact isolated finds (ZG-002-I, ZG-003-I, ZG-005-I, ZG-007-I, and ZG-008-I) were identified within the Project Area as a result of this study. Isolated finds are artifacts that are not associated with other artifacts or features and are not connected with the human activity that produced them. Isolates do not individually contribute to the broad patterns of history because they cannot be connected to a particular historical event (NRHP Criterion A/CRHR Criterion 1). Isolates are similarly difficult to associate with specific individuals due to their lack of association with archaeological or historical sites, and generally no information exists in the archival record to associate isolates with important individuals in history (NRHP Criterion B/CRHR Criterion 2). Isolates do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values (NRHP Criterion C/CRHR Criterion 3). Finally, isolates in general have no context or associations and therefore cannot provide important information in history or prehistory (NRHP Criterion D/CRHR Criterion 4). Isolated finds do not meet the eligibility criteria for inclusion in the NRHP or CRHR as individual resources, and therefore, are not Historical Resources under CEQA. Development of the Project Area would not result in any significant impacts to known Historical Resources under CEQA.

ZG-004 Oil Features

Archival Research Results

The Project Area is located on the Buena Vista and Midway-Sunset oil fields, two of the largest oil fields in the United States today. Until January 1, 1958, the Buena Vista Field was considered to be part of the larger Midway-Sunset Field to the southwest; now, however, the two are considered to be geologically separate (DOGGR 2019). The Project Area contains wells associated with both the Buena Vista and Midway-Sunset oil fields. The first known well for the Sunset oil field (now Midway-Sunset oil field) was drilled in 1887 near the town of Maricopa. In 1903 the Midway oil field was joined with the Sunset oil field for form the Midway-Sunset Field (San Joaquin Valley Geology 2019). Over the next several decades additional wells were drilled in the Midway-Sunset Field throughout the San Joaquin Valley, and multiple towns including McKittrick, Oildale, and Moron (now Taft) were formed around the oil industry (San Joaquin Valley Geology 2019). One wellhead associated with the Midway-Sunset oil field is considered historically significant. The Lakeview Wellhead No. 1 is significant because it was the site of the largest accidental oil spill in history and is marked with NRHP landmark #485. The Lakeview Wellhead No. 1 is located near Maricopa.

Archival research indicated that there were eight wells drilled on the property containing the Project Area. A well labeled well 1 was the first well to be drilled in the Project Area sometime before 1917 by K.T. & O.

Co. However well 1 was not a great hole and by 1926, a proposal to abandon the well was submitted to the California State Mining Bureau by Standard Oil Co. of California (now Chevron) (DOGGR 2019). Little information could be found on K.T & O Co. with only one mention of a K.T. & O. oil well near Taft catching on fire in 1913 (San Joaquin Valley Geology 2019). In 1926 the wells within the Project Area were owned and operated by Standard Oil Company of California, an American company established in 1870 by John D. Rockefeller (Chevron 2019). Standard Oil Company dissolved into 34 smaller companies in 1911; one of these became Chevron, which owned the wells until 2000 (although Standard Oil Co. California shows up on forms for the wellheads in the Project Area through the 1970s). Between 1926 and 1965, Standard Oil Co. of California drilled seven additional wells (Numbers 36, 37, 38, 40, 69, 70, 75,and 269) on the property (DOGGR 2019). During the early 1940s most of the wells underwent alterations to increase the oil supply coming from the field. All the wells in the Project Area have been abandoned and plugged. The dates at which this occurred varies for each. Well 1 was abandoned in 1926, presumably at the time Standard Oil acquired the field. The remaining seven wells were abandoned around 1978, under ownership of Chevron U. S. A. with J. L. Rowland as the signee. All wells on site were plugged using the Perkins method, a common method to plug the holes with cement. Chevron U. S. A. transferred the ownership of the field to Crimson Resource Management Corporation in 2000. In 2010, Crimson Resource Management Corporation transferred ownership to Occidental of Elk Hills, Inc. In 2013, Occidental of Elk Hills, Inc. transferred to Vintage Production California LLC. Then, in February of 2016, it was transferred to California Resources Production Corporation and lastly, in March 2016, it was transferred to California Resources Elk Hills (DOGGR 2019).

Evaluation

ZG-004 is a set of historic-period oil features consisting of six wellheads with associated pipes and valves, a wood-lined pit, and a cyclone separator. Archival research indicated that the site is a part of the historically mined Midway-Sunset oil field, one of the largest oil fields in the United States today, which was first mined in the 1880s. The first well on site (well 1) was drilled some time before 1917 and, as such, the site is associated with the early mining of the Midway-Sunset field. However, well 1 was not the first well dug in the Midway-Sunset oil field, nor was it the best producing, having been abandoned within a few years. The first well to exploit the Midway-Sunset oil field was drilled in Maricopa in 1887. The remainder of the wells in ZG-004 were constructed between 1926 and 1965, after the early years of oil production in the region. None of the wells in the Project Area were associated with a significant gushing event. The NRHP-listed Lakeview Wellhead No. 1 is located in Maricopa and has no apparent association with the wellheads in the Project Area. The wells in the Project Area were installed by K. T. & O. Co. Little information is available about this company, and it appears to be one of many oil companies working in the region at the time. The first well drilled on the property appears to have been a bust and was abandoned by 1926. There are no indications that the features within ZG-004 were integral in the founding or growth of Taft or significant in the early oil industry within the region. There are currently no designated historic districts associated with the wells in the Project Area or within the one mile records search area. Based on archival research, the area of greatest significance for the oil industry in the region is located in and around Maricopa. Thus, although the oil features within ZG-004 are associated with the oil industry in the region, they did not significantly contribute to the formation or success of the industry

and, thus, are not eligible for the CRHR under Criterion 1 as an individual resource and it is not a contributor to a known historic district.

There are no available records stating the names of the people involved in K. T. & O. Co., the first company to drill for oil on the property. The property was subsequently sold to Standard Oil, a company founded by John D. Rockefeller. However, the wells on this property were a small portion of the vast property owned by Standard Oil and there is no indication that Mr. Rockefeller, nor any other prominent person in the company was ever personally involved in the mining of this site, nor were these wells the primary reason for the success of the company. The site is not significantly associated with a person or group of people important in history and the site is not eligible for the CRHR under Criterion 2.

All of the engineered structures at this oil field are standard or typical among oil fields. All techniques/ methods used in this oil field according to the well records for each well, appear to be typical among oil fields of this nature. The oil features associated with ZG-004 are typical and do not represent the work of a master or possess any high artistic values. Therefore, this site does not meet eligibility criteria under CRHR Criterion 3.

The data potential of this site lies in the historic record. The oil well structures have been removed and the wells have been abandoned and plugged. Although the site may contain a series of buried pipes that connect the individual wellheads and other features to the cyclone separator, it is unlikely that these pipes would reveal any information about the site not available in the archival record. The data potential for this site has been exhausted through recording and archival research and site ZG-004 does not have the potential to yield additional important information in prehistory or history and is, therefore, not eligible under CRHR Criterion 4.

Lastly, this site is composed of the remnants of oil drilling features where the oil rigs have been removed and the existing wells have been abandoned and plugged. In addition, the cyclone separator shows evidence of having undergone some modern alterations and records show that the wells underwent alterations in the 1940s. The removal of the original oil structures and the alterations to the wells and cyclone separator has compromised the integrity of design, workmanship, and feeling of the site. Thus the site does not retain enough integrity to be considered eligible for the CRHR.

Site ZG-004 is evaluated as not eligible for listing in the CRHR under any criteria and lacks sufficient integrity to be significant. It is not a Historical Resource as defined by CEQA.

7.0 MANAGEMENT CONSIDERATIONS

7.1 Conclusions

Five isolated finds and one historic-period oil feature site were identified within the Project Area as a result of this study. All six resources were evaluated using CRHR eligibility criteria and are recommended as not eligible for listing in the CRHR under any criteria.

7.2 Likelihood for Subsurface Cultural Resources

Sediments in the Project Area consist of Holocene alluvial deposits that were deposited concurrently with human occupation of the region. The Project Area is known to contain buried wells, pipes, and potentially other features associated with the historic-period oil mining on the property. The construction of these features and the use of the Project Area as an oil field likely resulted in disturbances to the sediments throughout the area. These disturbances likely removed or displaced any pre-contact sites that were present within the surface or near surface sediments. There may be pockets of undisturbed alluvium present, but these are likely sporadically spaced throughout the site. Given the presence of known buried historic-period features coupled with the identification of several pre-contact isolated finds on the site, which may have been displaced through prior use of the area as an oil field, the likelihood of the site to contain subsurface cultural resources is considered high.

7.3 Summary and Recommendations

All six resources identified within the Project Area were evaluated using CRHR eligibility criteria and were evaluated as not eligible for listing in the CRHR under any criteria. Because no Historical Resources as defined by CEQA were identified in the Project Area, the proposed Project would not result significant impacts to known Historical Resources.

In all cases, the lead agency will require that any unanticipated (or post-review) discoveries found during project construction be managed through a procedure designed to assess and treat the find as quickly as possible and in accordance with applicable state and federal law. However, until the lead agencies concur with the identification and evaluation of eligibility of cultural resources, including archaeological sites, standing structures, no ground-disturbing activity or demolition should occur.

7.4 Post-Review Discoveries

The Project Area is known to contain buried historic-period pipes and potentially other features associated with ZG-004. Although this site is not considered a Historical Resource as defined by CEQA, and no mitigation is required for it, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources. The potential for subsurface resources within the Project Area is considered high. CEQA requires the Lead Agency to address any unanticipated cultural resource discoveries during project construction. Therefore, ECORP recommends the following mitigation measures be adopted and implemented by the Lead Agency to reduce potential adverse impacts to Less than Significant:

- A qualified archaeological monitor working under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to monitor all ground disturbing activities within the Project Area. If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery until the archaeologist can evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find represents a cultural resource that is associated with the historic-oil fields (ZG-004) but the new find would not alter the evaluation of that resource as not eligible for the CRHR, the archaeologist will record the new find for the archaeological record and construction will be allowed to continue.
- If the professional archaeologist determines that the find represents a cultural resource that is not associated with ZG-004 or could potentially alter the findings of the evaluation of that resource, he or she shall immediately notify the City and applicable landowner. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Kern County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

The Lead Agency is responsible for ensuring compliance with these mitigation measures because damage to significant cultural resources is in violation of CEQA. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, *Mitigation Monitoring or Reporting*, "the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however,

until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."

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LIST OF ATTACHMENTS

Attachment A – Records Search Confirmation

Attachment B – Sacred Lands File Coordination

Attachment C – Project Area Photographs

Attachment D – ***Confidential*** Cultural Resources Site Locations and Site Records

ATTACHMENT A

Records Search Confirmation

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

10/4/2019

Robert Cunningham
ECORP Consulting, Inc.
215 N. 5th Street
Redlands, CA 92374

Re: 2019-192 Z Global Gas Co Road Technical Studies
Records Search File No.: 19-375

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Taft USGS 7.5' quad. The following reflects the results of the records search for the project area and the 1.0 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shapefiles

Resources within project area:	None
Resources within 1.0 mile radius:	67 resources (list enclosed)
Reports within project area:	7 reports (list enclosed)
Reports within 1.0 mile radius:	19 reports (list enclosed)

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see

http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see
http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see
http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or
http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see
http://www.slc.ca.gov/Info/Shipwrecks.html

Soil Survey Maps: Not available at SSJVIC; please see
http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Celeste M. Thomson
Coordinator

Reports in PA: KE-
318
321
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2010
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Reports in 1 Mi: KE-
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ATTACHMENT B

Sacred Lands File Coordination

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

September 25, 2019

Robert J. Cunningham
ECORP Consulting, Inc.

VIA Email to: rjcunningham@ecorpconsulting.com

RE: 2019-192 Z Global Gas Co Road Technical Studies Project, Kern County

Dear Mr. Cunningham:

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

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

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

Attachment

Native American Heritage Commission
Native American Contacts List
September 25, 2019

Big Pine Paiute Tribe of the Owens Valley
James Rambeau, Sr., Chairperson
P.O. Box 700
Big Pine ,CA 93513
j.rambeau@bigpinepaiute.org
(760) 938-2003
(976) 938-2942 Fax
Paiute - Shoshone

Big Pine Paiute Tribe of Owens Valley
Sally Manning, Environmental Director
P.O. Box 700
Big Pine ,CA 93513
s.manning@bigpinepaiute.org
(760) 938-2003
(760) 938-2942 Fax
Paiute

Big Pine Paiute Tribe of the Owens Valley
Danelle Gutierrez THPO
P.O. Box 700
Big Pine ,CA 93513
d.gutierrez@bigpinepaiute.org
(760) 938-2003, ext. 228
(760) 938-2942 Fax
Paiute

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield ,CA 93307
chumashtribe@sbcglobal.net
(661) 322-0121
Chumash

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella ,CA 93240
(661) 340-0032 Cell
Kawaiisu
Tubatulabal

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella ,CA 93240
bbutterbredt@gmail.com
(760) 378-2915 Cell
Tubatulabal
Kawaiisu

Kern Valley Indian Community
Brandy Kendricks
30741 Foxridge Court
Tehachapi ,CA 93561
krazykendricks@hotmail.com
(661) 821-1733
(661) 972-0445
Kawaiisu
Tubatulabal

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield ,CA 93305
2deedominguez@gmail.com
(626) 339-6785
Yowlumne
Kitanemuk

San Manuel Band of Mission Indians
Lee Clauss, Director-CRM Dept.
26569 Community Center Drive
Highland ,CA 92346
lclauss@sanmanuel-nsn.gov
(909) 864-8933
(909) 864-3370 Fax
Serrano

San Manuel Band of Mission Indians
Lynn Valbuena, Chairwoman
26569 Community Center Dr.
Highland ,CA 92346
(909) 864-8933
Serrano

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
2019-192 Z Global Gas Co Road Technical Studies Project, Kern County.

Native American Heritage Commission
Native American Contacts List
September 25, 2019

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8 — Tache
Lemoore ,CA 93245 — Tachi
(559) 924-1278 — Yokut
(559) 924-3583 Fax

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokuts
Salinas ,CA 93906 — Mono
kwood8934@aol.com — Wuksache
(831) 443-9702

Tejon Indian Tribe
Octavio Escobedo, Chairperson
1731 Hasti-acres Drive, Suite 108 — Kitanemuk
Bakersfield ,CA 93309
oescobedo@tejonindiantribe-nsn.gov
(661) 834-8566
(661) 834-8564 Fax

Tejon Indian Tribe
Colin Rambo, Cultural Resources Management
1731 Hasti-Acres Drive, Suite 108 — Kitanemuk
Bakersfield ,CA 93309
colin.rambo@tejonindiantribe-nsn.go
(661) 834-8566
(484) 515-4790 Cell

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226 — Tubatulabal
Lake Isabella ,CA 93240
(760) 379-4590
(760) 379-4592 Fax

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 — Yokuts
Porterville ,CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271
(559) 781-4610 Fax

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
2019-192 Z Global Gas Co Road Technical Studies Project, Kern County.

ATTACHMENT C

Project Area Photographs

State of California - Natural Resources Agency **Primary#**
DEPARTMENT OF PARKS AND RECREATION HRI#

PHOTOGRAPH RECORD

Trinomial

Page ___ of __ **Project Name:** Z Global – Gas Company Road Technical Studies Project **Year:** 2019
Camera Format: iPhone 6s **Lens Size:** 4.15mm **Film Type and Speed:** Digital & 1/2000sec.
Negatives Kept at: ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste.370, San Diego, CA 92108

Month	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
October	17	1:40 pm	IMG_0704	ZG-001: Transmission Pole Close-up 1999 (SM11256)	E	1
October	17	1:40 pm	IMG_0705	ZG-001: Transmission Pole w/ Meter	NW	2
October	17	1:55 pm	IMG_0706	ZG-001: Transmission Pole (NU47D)	SE	3
October	17	2:00 pm	IMG_0708	ZG-001: Transmission Pole (1100451)	N	4
October	17	2:10 pm	IMG_0709	ZG-002-I: CCS Core	N	5
October	17	2:10 pm	IMG_0710	ZG-002-I: CCS Core	W	6
October	17	2:10 pm	IMG_0711	ZG-002-I: CCS Core	W	7
October	17	2:15pm	IMG_0712	ZG-001: Transmission Pole (NU47D)	E	8
October	17	2:35 pm	IMG_0713	ZG-001: Transmission Pole (120001485)	N	9
October	17	2:50 pm	IMG_0714	ZG-001: Overview of Powerline	E	10
October	17	2:55 pm	IMG_0715	ZG-001: Intersections of Powerlines at Feature 7	NW	11
October	17	3:25 pm	IMG_0716	Overview of Project Area from NE Corner	SW	12
October	17	4:00 pm	IMG_0717	ZG-003-I: Owens Illinois Bottle Base	N	13
October	17	4:15 pm	IMG_0719	ZG-004: WH38 Close-up	W	14
October	17	4:25 pm	IMG_0720	ZG-005-I: Owens Illinois Bottle Base	N	15
October	17	4:30 pm	IMG_0721	ZG-004: WH37 Close-up	W	16
October	17	4:45 pm	IMG_0722	ZG-004: WH? (unknown designation)	W	17
October	17	5:00 pm	IMG_0723	ZG-006: Oil Drilling Related Feature	N	18
October	17	5:10 pm	IMG_0724	ZG-004: WH1 Close-up	N	19
October	18	7:35 am	IMG_0726	ZG-004: WH75? Close-up	N	20
October	18	7:35 am	IMG_0727	ZG-004: Overview of Pipe System	SW	21
October	18	8:00 am	IMG_0728	ZG-004: WH75-2? Close-up	N	22
October	18	8:05 am	IMG_0729	ZG-004: WH69 Close-up	N	23
October	18	8:25 am	IMG_0730	ZG-007-I: CCS Flake	N	24
October	18	8:25 am	IMG_0731	ZG-007-I: CCS Flake	N	25
October	18	8:40 am	IMG_0732	ZG-008-I: CCS Flake	N	26
October	18	8:40 am	IMG_0733	ZG-008-I: CCS Flake	N	27
October	18	8:40 am	IMG_0735	ZG-008-I: CCS Flake	N	28

Page ___ of __ **Project Name:** Z Global – Gas Company Road Technical Studies Project **Year:** 2019

October	18	9:10 am	IMG_0736	ZG-009: Cyclone Separator	NW	29
October	18	9:10 am	IMG_0737	ZG-009: Signs Related to Separator	W	30
October	18	9:10 am	IMG_0738	ZG-009: Connection	N	31
October	18	9:10 am	IMG_0739	ZG-009: Pipe & Manhole	W	32
October	18	9:30 am	IMG_0740	ZG-010: Powerline Overview	N	33
October	18	9:30 am	IMG_0741	ZG-010: Transmission Pole (CTC 1203896)	W	34
October	18	9:30 am	IMG_0742	ZG-010: Transmission Pole (JP 1869)	W	35
October	18	9:40 am	IMG_0743	ZG-010: Transmission Pole (CTC 1202894)	W	36

IMG_0737

IMG_0738

IMG_0739

IMG_0740

IMG_0741

IMG_0742

IMG_0743

IMG_0704

IMG_0705

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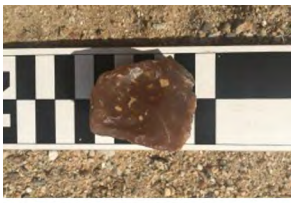
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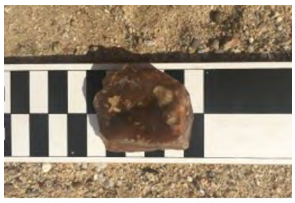
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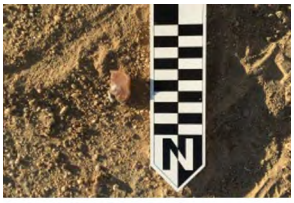
IMG_0731

IMG_0732

IMG_0733

IMG_0735

IMG_0736

GAUGE SETTING
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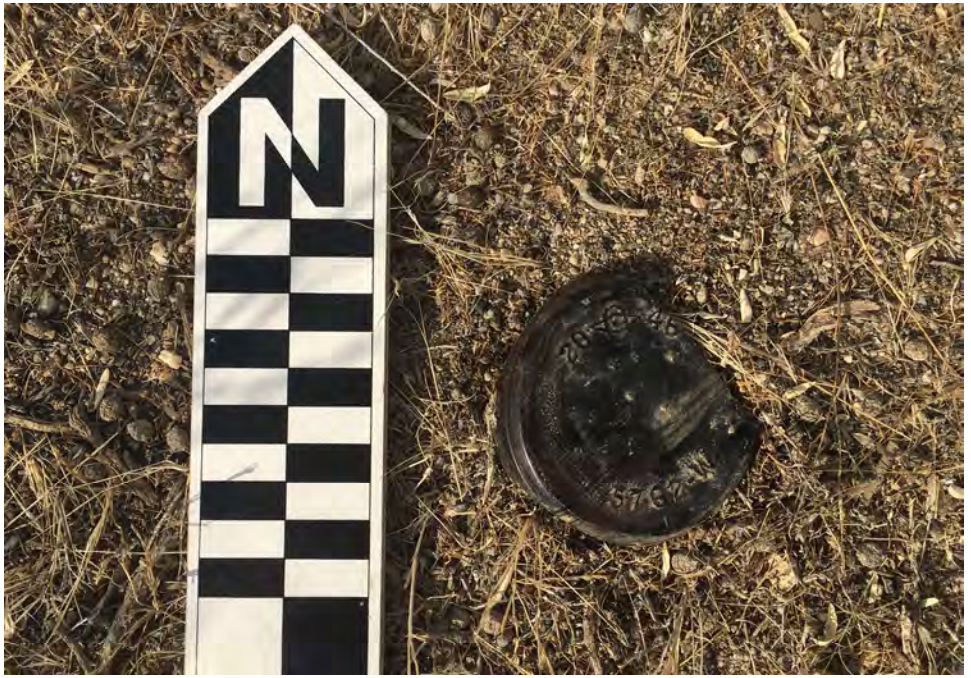
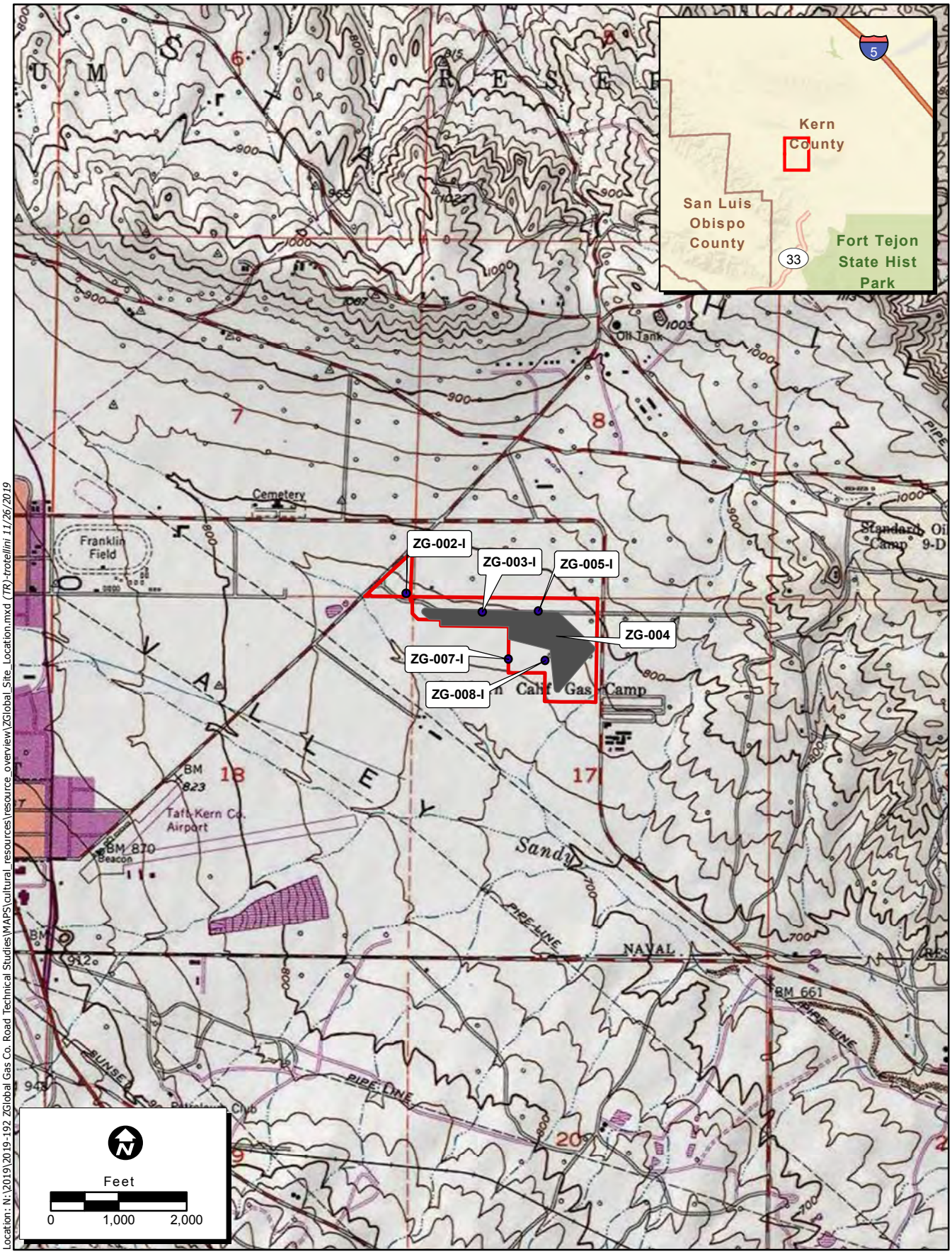
·I2001485·


N

Confidential Cultural Resources Site Locations and Site Records

This Attachment contains information on the specific location of cultural resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the specific location of pre-contact and historic sites is exempt from the Freedom of Information Act and California Public Records Act.



Location: N:\2019\2019-192 ZGlobal Gas Co. Road Technical Studies\MAPS\cultural_resources\resource_overview\ZGlobal_Site_Location.mxd (TR)-trotellini 11/26/2019

Map Date: 11/26/2019

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Site Location

2019-192 ZGlobal Gas Co. Road Technical Studies

State of California ♉ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

OtherListings
Review Code | Reviewer | Date

 ***Resource Name or #:** ZG-002-I
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted** ***a. County:** Kern
***b. USGS 7.5' Quad**: Taft, Calif. **Date:** 1950 (Photo Revised: 1973) **T** 32S, **R** 24E; NE ¼ **of** NE ¼ **of Sec** 18; **M.D.B.M.**
c. Address: **City:** **Zip:**
d. UTM: Zone 11N, 278648 **mE/** 3892557 **mN**
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east} onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east} onto East Ash Street and drive for 40 feet and the isolate will be located on the left (north) side of the road.

***P3a. Description:** The isolate consists of a single edge modified lithic core. The core measures 5cm x 4cm x 1.5cm. The material is a reddish-brown mottled cryptocrystalline silicate (CCS). The core contains nine major flake scars, with six edges showing utilization and one edge that shows unifacial pressure flaking (measures 3cm). The isolate was located on a graded dirt patch, around 5 meters to the north of a paved road. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt. The isolate is in poor condition with impacts from environmental exposure/erosion, pedestrian traffic and proximity to modern roadways.

***P3b. Resource Attributes:** AP2. Lithic Scatter
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5b. Description of Photo: IMG_0710: CCS Core (View: West), 10/17/2019, Accession #6

P5a. Photograph

***P6. Date Constructed/Age:**
☐ Historic ☒ Prehistoric ☐ Both

***P7. Owner and Address:**
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

***P8. Recorded by:** John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

***P9. Date Recorded:** 10/17/2019

***P10. Survey Type:** Class III Pedestrian Survey

***P11. Report Citation**: Liss, Paige and John O'Connor. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California.

***Attachments:** ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial

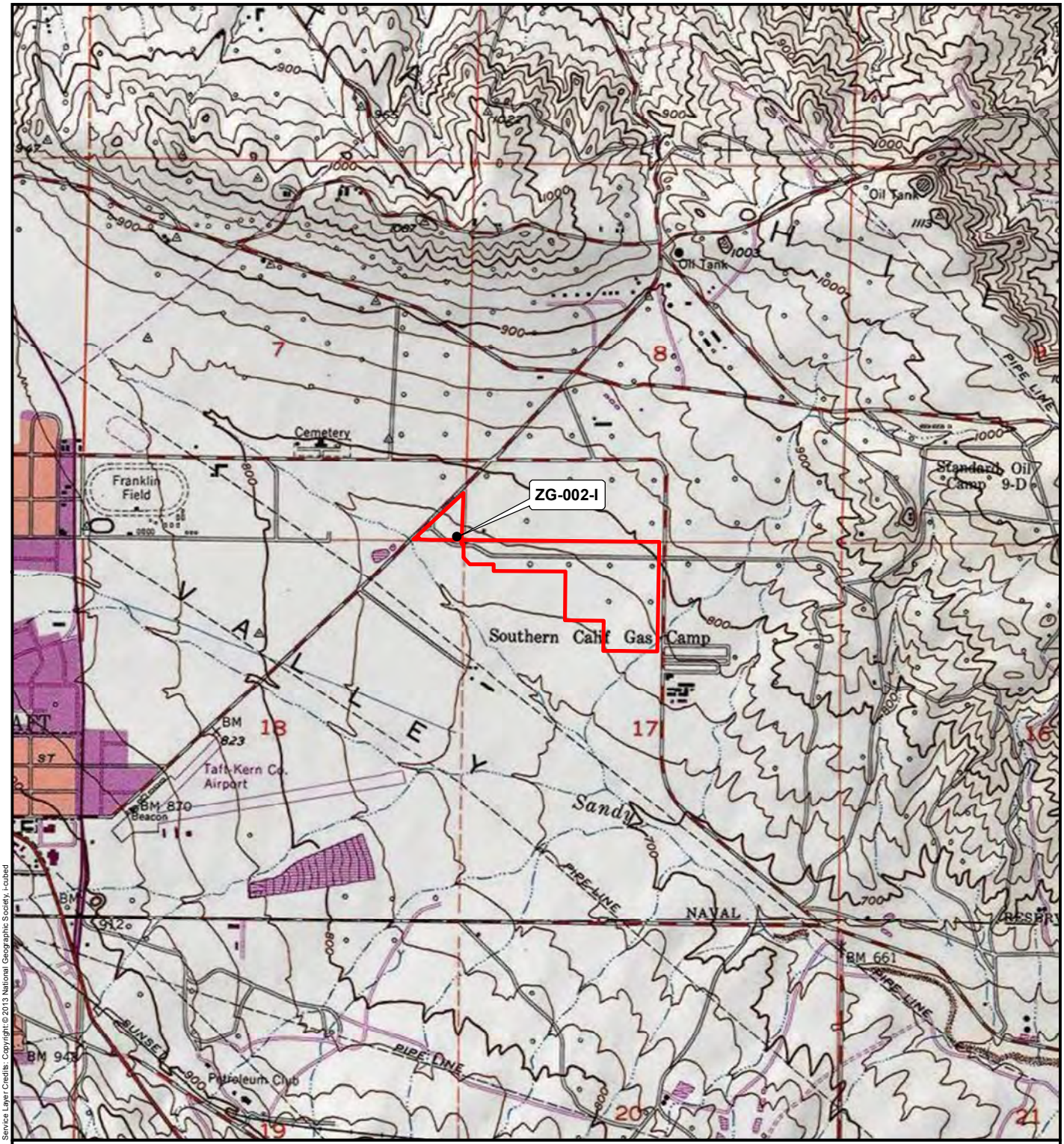
Page X **of** X

***Resource Name or #:** ZG-002-I

***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



*Required Information

0 1,000 2,000 4,000 Feet
0 250 500 1,000 Meters

DRAFT

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

DPR 523J (1/95)

Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed

Location: N:\2019\2019-192 ZGlobal Gas Co. Road Technical Studies\MAPS\cultural_resources\dpr_location\DPR_LOC_ZG002I.mxd (TR)-hotellin| 11/29/2019

State of California ♉ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

OtherListings
Review Code | Reviewer | Date

Page 1 **of** 2 ***Resource Name or #:** ZG-003-I
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted** ***a. County:** Kern
***b. USGS 7.5' Quad**: Taft, Calif. **Date:** 1950 (Photo Revised: 1973) **T** 32S, **R** 24E; NW ¼ **of** NW ¼ **of Sec** 17; M.**D.B.M.**
c. Address: **City:** **Zip:**
d. UTM: Zone 11N, 278989 **mE/** 3892470 **mN**
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east) onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east) onto East Ash Street and drive for 40 feet, to the north there will be a split onto a dirt road. Follow this dirt road southeast for 0.21 miles and the isolate will be located on the right (south) side of the road.

***P3a. Description:** The isolate consists of a single historic diagnostic glass base. The glass base is brown in color with an Owens-Illinois makers mark and a date of 1946. The base measures 2 14/16". The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project Area. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt. The isolate is in poor condition with impacts from environmental exposure/erosion and OHV traffic.

***P3b. Resource Attributes:** AH4. Trash Scatter
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5b. Description of Photo: IMG_0717: Glass Bottle Base, (View: North), 10/17/2019, Accession #13

P5a. Photograph

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

***P8. Recorded by:** John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

***P9. Date Recorded:** 10/17/2019

***P10. Survey Type:** Class III Pedestrian Survey

***P11. Report Citation**: Liss, Paige and John O'Connor. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California.

***Attachments:** ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial

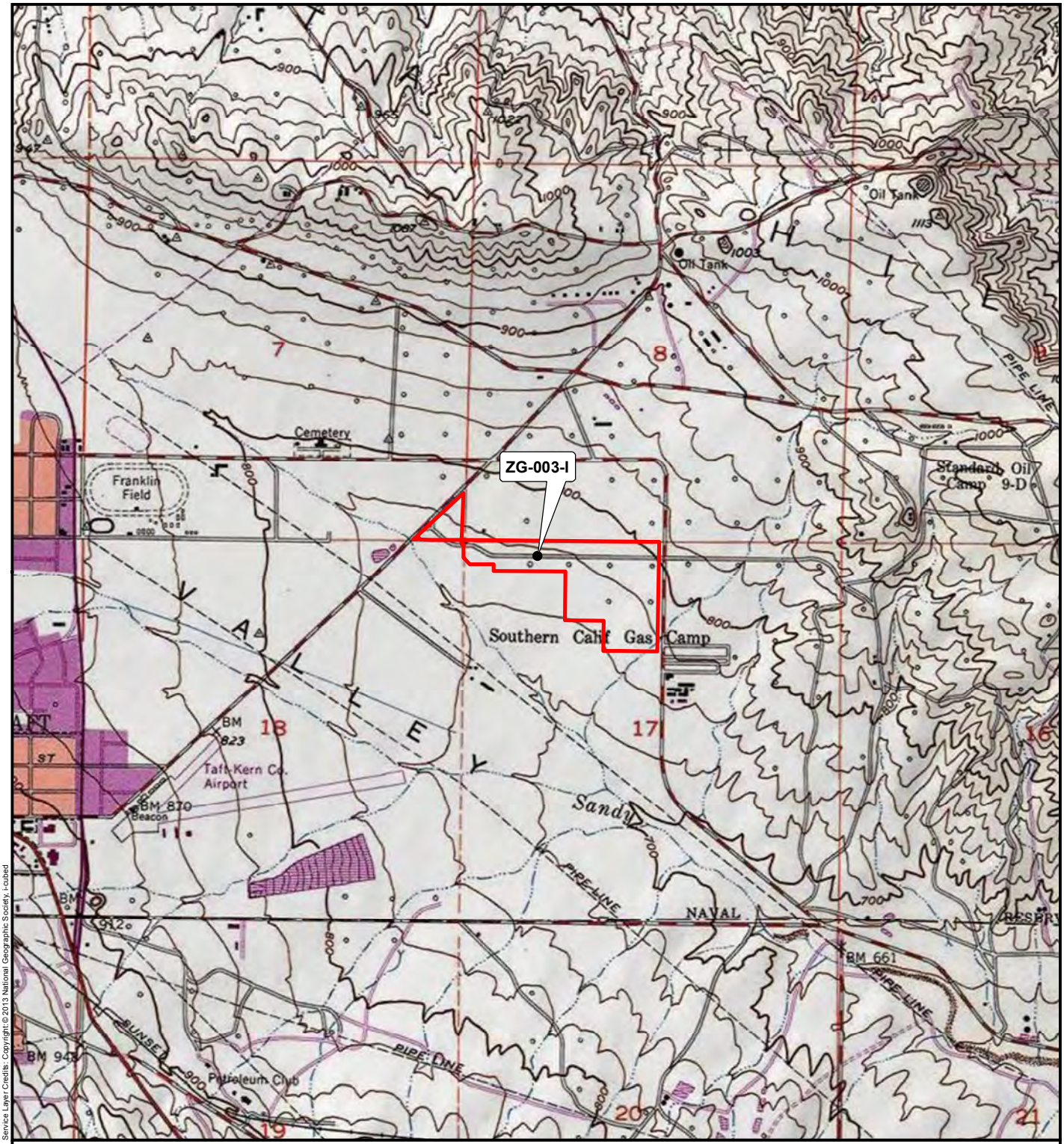
Page X **of** X

***Resource Name or #:** ZG-003-I

***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed

Location: N:\2019\2019-192 ZGlobal Gas Co. Road Technical Studies\MAPS\cultural_resources\dpr_location\DPR_LOC_ZG003I.mxd (TR)-hotellin\ 11/29/2019

***Required Information**

DPR 523J (1/95)

0 1,000 2,000 4,000 Feet
0 250 500 1,000 Meters

DRAFT

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

 *Resource Name or #:

*P2. Location: ☒ Not for Publication ☐ Unrestricted *a. County: Kern
*b. USGS 7.5' Quad: Taft, Calif. Date: 1950 (Photo Revised: 1973) T 32S, R 24E; NW ¼ of NW ¼, NE ¼ of NW ¼ of Section 17; M.D.B.M.
c. Address: City: Taft Zip:
d. UTM: Zone 11N, 279300 mE/ 3892380 mN
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east} onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east} onto East Ash Street and drive for 0.3 miles and the site's western boundary will have been reached.

*P3a. Description: ZG-004 consists of a set of historic-period features that are associated with the historic-period oil mining of the property. These consist of six well heads, a wood-lined pit, and a cyclone separator with attached pipes. The wellheads are denoted on the USGS Taft CA topographic map dating to 1950. Although, according to well records, they were originally drilled sometime before 1927. The project area is located on the Buena Vista & Midway Sunset Oil Fields, two of the largest oil fields in the United States today. Until January 1, 1958, the Buena Vista field was considered to be part of the larger Midway-Sunset Field to the southwest; now, however, the two are considered to be geologically separate (DOGGR 2019).

*P3b. Resource Attributes: AH9. Well-head, AH16. Other
*P4. Resources Present: ☐Building ☐Structure ☐Object ☒Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: Overview of ZG-004, Feature WH75-2; (View: North) (IMG_0728), 10/18/2019, Accession # 22

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both

*P7. Owner and Address: Private Owner

*P8. Recorded by: John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

*P9. Date Recorded: 10/17/2019
*P10. Survey Type: Intensive Pedestrian Survey

*P11. Report Citation: : O'Connor, John, Paige Liss, and Wendy Blumel. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California. Prepared by ECORP Consulting, Inc.

*Attachments: ☐NONE ☒Location Map ☒Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 0.46 mile. **(east-west) × b. Width:** 0.13 mile. **(north-south)**
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other:
Method of Determination (Check any that apply.): ☐ Artifacts ☒ Features ☐ Soil ☐ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ☐ Medium ☐ Low Explain: This resource likely continues onto adjacent properties

Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over ☒ Site limits incompletely defined
☐ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ☒Unknown Method of Determination:
***A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☐ Unknown (Explain): None

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):

Wellheads. The wellheads are first denoted on the USGS Taft, CA topographic map dating to 1950. The site is composed of six wellhead features, all connected across the site by a series of underground pipes. Historical maps and records indicate that nine wellheads were previously located on the property. Based on information obtained from the DOGGR, wells drilled within the Project Area were historically designated by the Standard Oil Co. as well numbers 1, 36, 37, 38, 40, 69, 70, 75, and 269. The wells have changed designation numbers with changes in ownership. However, for ease of reading, the historic numbers will be used throughout this report.

During the field survey the archaeologists identified six wellheads within the Project area. Based on information from the DOGGR, these identified wellheads likely correspond to well numbers 1, 37, 38, 75, and 69. In addition, one wellhead identified during the survey could not be assigned to a particular well number. This may correspond to historic well 70. Wells on the property that were not found during the survey include well 36, 40, and 269. The wellheads associated with these three wells may have been removed at the time they were plugged or have been damaged or buried.

Wellhead 1. The wellhead for well 1 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. The feature is mostly buried, unlike the others that extend approximately a foot above the ground surface. This wellhead was also in the worst condition, with a broken valve handle. The exposed portion of the pipe and wellhead measures 10in diameter by 6in high.

Wellhead 37. The wellhead for well 37 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. Within 15 feet of the well, a shard of amethyst glass and a few crushed cans, mostly bi-metal flat tip with interlocking side seam (not measurable), were found. The exposed portion of the pipe and wellhead measures 3ft by 3ft by approximately 2in high.

Wellhead 38. The wellhead for well 38 is situated along the south side of an unnamed dirt road running east to west through the upper portion of the Project Area. The exposed portion of the pipe and wellhead measures 7ft by 2ft by 1.5ft high.

Wellhead 69. The wellhead for well 69 is located approximately 30 feet to the west of Gas Company Road. The exposed portion of the pipe and wellhead measures 1ft by 2ft by 2.5ft high.

Wellhead 75. The wellhead for well 75 was designated as 75-2 in the DOGGR data. The exposed portion of the pipe and wellhead measures 1ft by 6in by 2.5ft high. A partially buried pipe and valve were noted approximately 50-feet to the west of well 75-2.

Undesignated well. During the survey, a wellhead was located approximately 50 feet to the southwest of well 37. This particular wellhead is not marked on any maps. This wellhead location included a pad of concrete located 10 feet to the west of the metal pipe-head. It is unclear if this pad is historic in age, and it was not recorded as a feature. The exposed portion of the pipe and wellhead measures 6ft by 6in high.

Wood Lined Pit. The wood-lined pit, a historic oil drilling related feature, was located less than 30m from WH1. The feature measures 6ft (N/S) by 6ft (E/W) by 3.5ft deep. The four sides of the pit are constructed with wooden planks and round nails. The pit it filled in partially with local soil/sand and plants. Surrounding the feature was rusted round nails, rusted miscellaneous metal fragments, fragmented pipes, glass shards (olive, clear, amethyst colored), wood and brick fragments, as well as patches of cement and asphalt with large conglomerates.

Cyclone Separator. The cyclone separator consists of a cyclone separator with two associated vertical pipes and two associated signposts located in the southwestern corner of the Project Area. The separator measures 5ft x 5ft x ~15ft high. The

cyclone separator has a modern sticker label placed on it that has a barcode and reads "Cyclone Separator 175184," there also seems to be new aluminum parts added to the cyclone separator and pipes. The separator, pipes, and signposts are all painted the same light green color and have a lot of rust. The signposts read "No Smoking" and "Gauge Setting West Section 17D." The pipes connected to the six well heads described above all seem to be leading to this cyclone separator. Many of the metal pipes and levers attached to separator have been disabled and the separator and pipes appear to no longer be used.

***A5. Cultural Constituents (**Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): Glass fragments and a historic-period can noted near well features.

***A6. Were Specimens Collected?** ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
***A7. Site Condition:** ☐ Good ☒Fair ☐ Poor (Describe disturbances.): The site is in good condition, however, multiple OHV tracks run through the site and there is evidence of modern maintenance/upkeep on these features, thus the site lacks integrity.

***A8. Nearest Water** (Type, distance, and direction.)**:** Ephemeral washes throughout area.
***A9. Elevation:** 802 feet above mean sea level

A10. Environmental Setting: The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt; geology is Holocene alluvium.

A11. Historical Information: The Project Area is located on the Buena Vista & Midway Sunset Oil Fields, two of the largest oil fields in the United States today. Until January 1, 1958, the Buena Vista field was considered to be part of the larger Midway-Sunset Field to the southwest; now, however, the two are considered to be geologically separate (DOGGR 2019). The Project Area contains wells associated with both the Buena Vista and Midway Subset Oil Fields. The first known well for the Sunset oil field (now Midway-Sunset oil field) was drilled in 1887 near the town of Maricopa. In 1903 the Midway oil field was joined with the Sunset oil field for form the Midway-Sunset field (San Joaquin Valley Geology 2019). Over the next several decades additional wells were drilled in the Midway-Sunset field throughout the San Joaquin Valley and multiple towns including McKittrick, Oildale, and Moron (now Taft) were formed around the oil industry (San Joaquin Valley Geology 2019). One well head associated with the Midway Sunset Oil Field is considered historically significant. The Lakeview wellhead No. 1 is significant because it was the site of the largest accidental oil spill in history and is marked with NRHP landmark #485. The Lakeview wellhead No. 1 is located near Maricopa.

Archival research indicated that there were eight wells drilled on the property containing the Project Area. A well labeled well 1 was the first well to be drilled in the Project Area sometime before 1917 by K.T. & O. Co, however it was not a great hole and by 1926, a proposal to abandon the well was submitted to the California State Mining Bureau by Standard Oil Co. of California (now Chevron) (DOGGR 2019). Little information could be found on K.T & O Co. with only one mention of a K.T. & O. Oil well near Taft catching on fire in 1913 (San Joaquin Valley Geology 2019). In 1926 the wells within the Project Area were owned and operated by Standard Oil Company of California, an American company established in 1870 by John D. Rockefeller (Chevron 2019). Standard Oil Company dissolved into 34 smaller companies in 1911, one of these became Chevron, which owned the wells until 2000 (although Standard Oil CO. California shows up on forms for the well heads in the Project Area through the 1970s). Between 1926 and 1965, Standard Oil Co. of California drilled seven additional wells Numbers 36, 37, 38, 40, 69, 70, 75,and 269) on the property (DOGGR 2019). During the early 1940s most of the wells underwent alterations to increase the oil supply coming from the field. All the wells in the Project Area have been abandoned and plugged. The dates at which this occurred varies for each. Well WH 1 was abandoned in 1926, presumably at the time Standard Oil acquired the field. The remining seven wells were abandoned around 1978, under ownership of Chevron U. S. A. with J. L. Rowland as the signee. All wells on site were plugged using the Perkins method, a common method to plug the holes with cement. Chevron U. S. A. transferred the ownership of the field to Crimson Resource Management Corporation in 2000. In 2010, Crimson Resource Management Corporation transferred ownership to Occidental of Elk Hills, Inc. In 2013, Occidental of Elk Hills, Inc. transferred to Vintage Production California LLC. Then in February of 2016 it was transferred to California Resources Production Corporation and lastly in March 2016 it was transferred to California Resources Elk Hills (DOGGR 2019).

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☒1914-1945 ☒ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

CRHR Evaluation

ZG-004 is a set of historic-period oil features consisting of six wellheads with associated pipes and valves, a wood-lined pit, and a cyclone separator. Archival research indicated that the site is a part of the historically mined Midway-Sunset oil field, one of the largest oil fields in the United States today, which was first mined in the 1880s. The first well on site (well 1) was drilled some time before 1917 and, as such, the site is associated with the early mining of the Midway-Sunset field. However, well 1 was not the first well dug in the Midway-Sunset oil field, nor was it the best producing, having been abandoned within a few years. The first well to exploit the Midway-Sunset oil field was drilled in Maricopa in 1887. The remainder of the wells in ZG-004 were constructed between 1926 and 1965, after the early years of oil production in the region. None of the wells in the Project Area were associated with a significant gushing event. The NRHP-listed Lakeview Wellhead No. 1 is located in Maricopa and has no apparent association with the wellheads in the Project Area. The wells in the Project Area were installed by K. T. & O. Co. Little information is available about this company, and it appears to be one of many oil companies working in the region at the time. The first well drilled on the property appears to have been a bust and was abandoned by 1926. There are no indications that the features within ZG-004 were integral in the founding or growth of Taft or significant in the early oil industry within the region. There are currently no designated historic districts associated with the wells in the Project area or within records search area within one mile of the site. Based on archival research, the area of greatest significance for the oil industry in the region is located in and around Maricopa. Thus, although the oil features within ZG-004 are associated with the oil industry in the region, they did not significantly contribute to the formation or success of the industry and, thus, are not eligible for the CRHR under Criterion 1 as an individual resource and it is not a contributor to a known historic district.

There are no available records stating the names of the people involved in K. T. & O. Co., the first company to drill for oil on the property. The property was subsequently sold to Standard Oil, a company founded by John D. Rockefeller. However, the wells on this property were a small portion of the vast property owned by Standard Oil and there is no indication that Mr. Rockefeller, nor any other prominent person in the company was ever personally involved in the mining of this site, nor were these wells the primary reason for the success of the company. The site is not significantly associated with a person or group of people important in history and the site is not eligible for the CRHR under Criterion 2.

All of the engineered structures at this oil field are standard or typical among oil fields. All techniques/ methods used in this oil field according to the well records for each well, appear to be typical among oil fields of this nature. The oil features associated with ZG-004 are typical and do not represent the work of a master or possess any high artistic values. Therefore, this site does not meet eligibility criteria under CRHR Criterion 3.

The data potential of this site lies in the historic record. The oil well structures have been removed and the wells have been abandoned and plugged. Although the site may contain a series of buried pipes that connect the individual wellheads and other features to the cyclone separator, it is unlikely that these pipes would reveal any information about the site not available in the archival record. The data potential for this site has been exhausted through recording and archival research and site ZG-004 does not have the potential to yield additional important information in prehistory or history and is, therefore, not eligible under CRHR Criterion 4.

Lastly, this site is composed of the remnants of oil drilling features where the oil rigs have been removed and the existing wells have been abandoned and plugged. In addition, the cyclone separator shows evidence of having undergone some modern alterations. The removal of the original oil structures and the alterations to the cyclone separator has compromised the integrity of design, workmanship, and feeling of the site.

Site ZG-004 is evaluated as not eligible for listing in the CRHR under any criteria and lacks sufficient integrity to be significant. It is not a Historical Resource as defined by CEQA.

A14. Remarks: None

A15. References (Documents, informants, maps, and other references):

California Department of Conservation Division of Oil, Gas and Geothermal Resources (DOGGR). 2019. Well Finder. Electronic document. https://www.conservation.ca.gov/dog/Pages/Index.aspx. Accessed on November 25, 2019.

San Joaquin Valley Geology. 2019. Important Dates in the Oil History of the San Joaquin Valley. Electronic resource. http://www.sjvgeology.org/history/sjv_chronology.html. Accessed December 9, 2019.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):
Original Media/Negatives Kept at: ECORP Consulting, Inc.

***A17. Form Prepared by: Paige Liss and Wendy Blumel** **Date:** 12/10/2019
Affiliation and Address: ECORP Consulting, Inc. 215 N. Fifth Street, Redlands, CA 92374.

Overview of Wood-lined Pit, (View: North) (IMG_0723), 10/17/2019, Accession #18

Overview of Cyclone Separator, (View: Northwest) (IMG_0736), 10/18/2019, Accession #29

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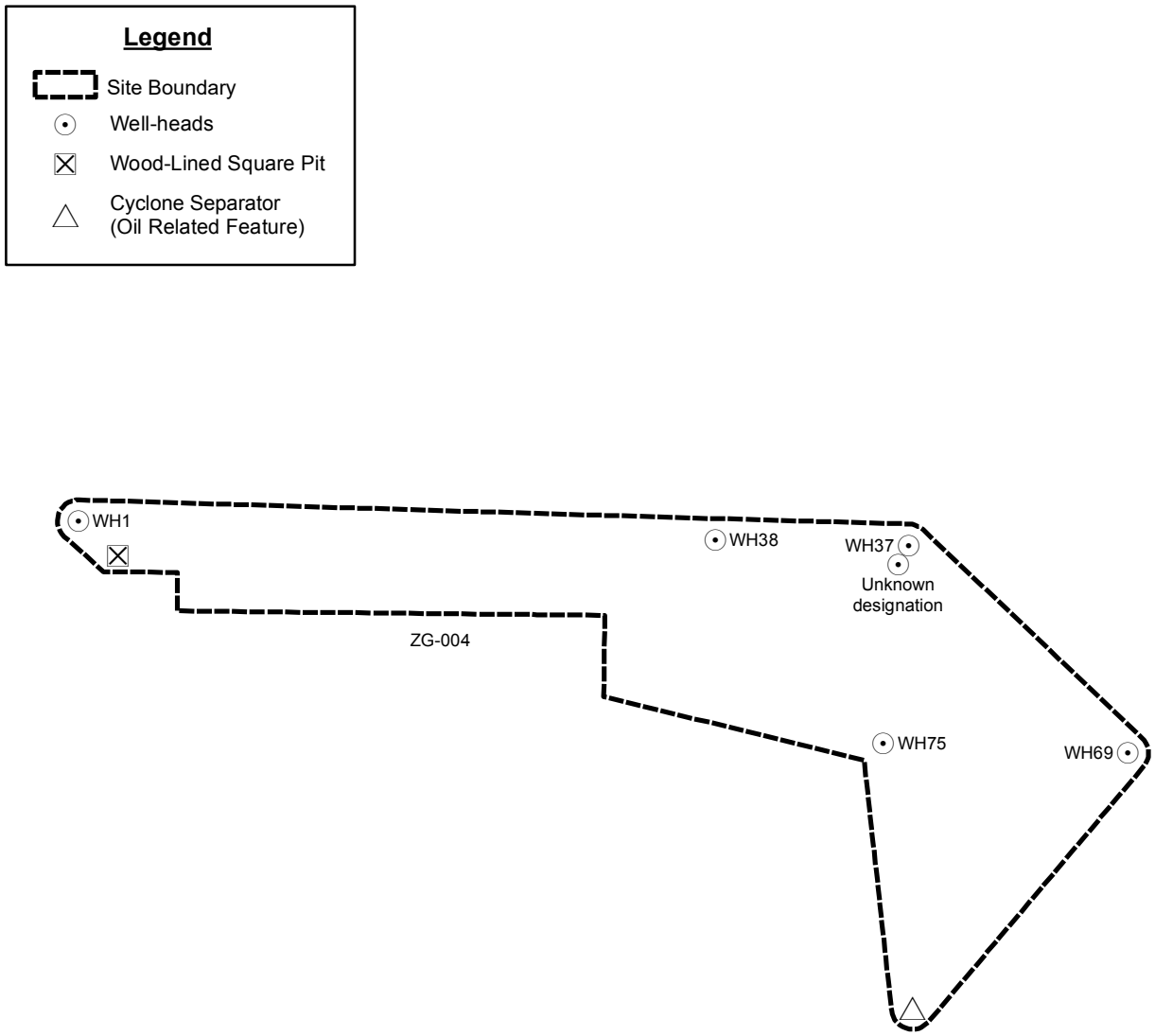
SKETCH MAP

Primary #
HRI #
Trinomial

***Resource Name or #:** ZG-004

***Drawn By:** John O'Connor

***Date:** 10/17/2019 and 10/18/2019



*Required Information

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DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

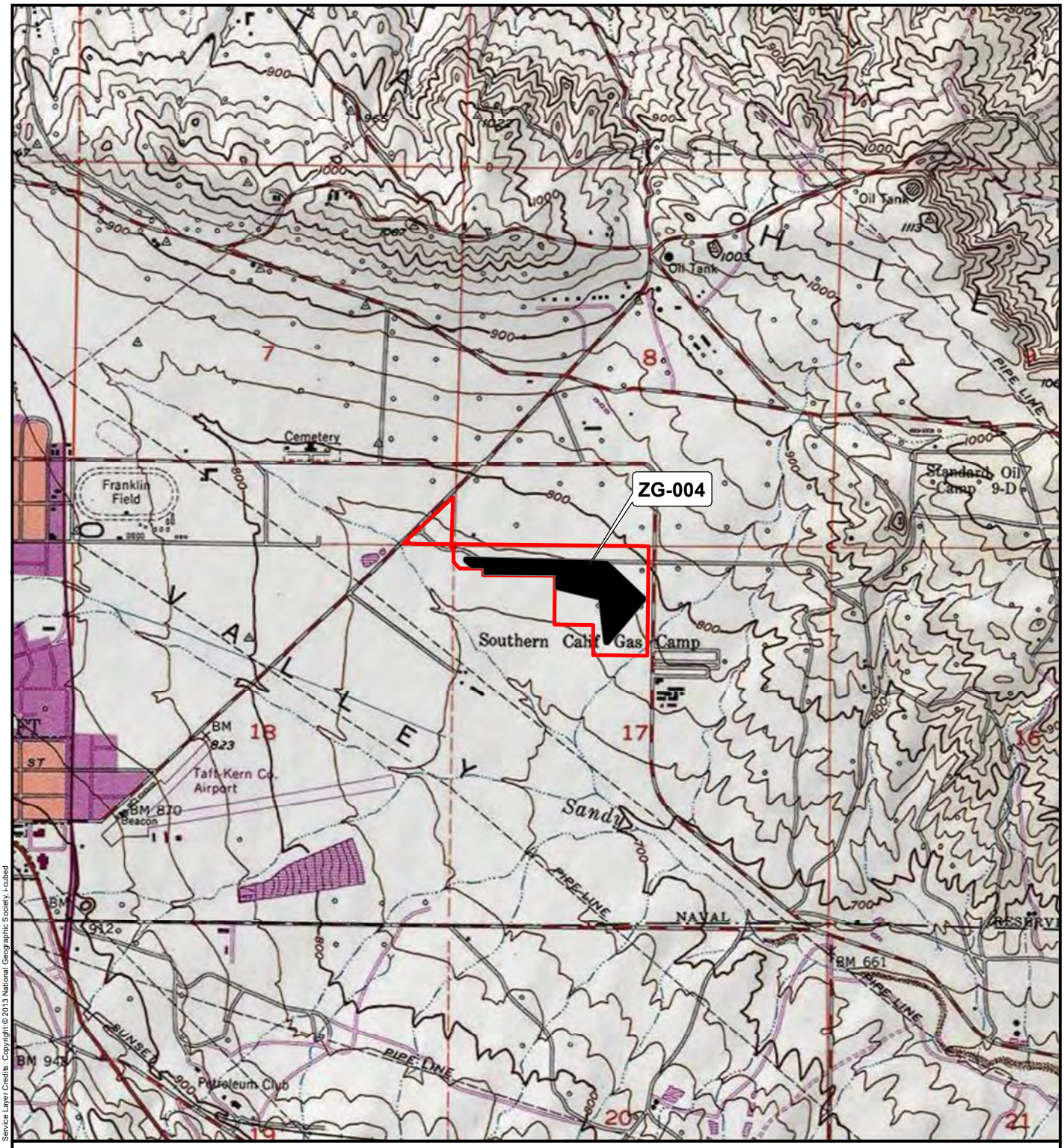
Primary #
HRI #
Trinomial

***Resource Name or #:** ZG-004

***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



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***Required Information**

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PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

OtherListings
Review Code | Reviewer | Date

 ***Resource Name or #:** ZG-005-I
P1. Other Identifier:

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***b. USGS 7.5' Quad**: Taft, Calif. **Date:** 1950 (Photo Revised: 1973) **T** 32S, **R** 24E; NE ¼ **of** NW ¼ **of Sec** 17; **M.D.B.M.**
c. Address: **City:** **Zip:**
d. UTM: Zone 11N, 279241 **mE/** 3892472 **mN**
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east} onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east} onto East Ash Street and drive for 40 feet to the north there will be a split onto a dirt road. Follow this dirt road southeast for 0.37 miles and the isolate will be located on the left (north) side of the road.

***P3a. Description:** The isolate consists of a single historic diagnostic glass base. The glass base is brown in color, and although it is fragmented, an Owens-Illinois makers mark is visible. The fragmented base measures 1 12/16". Some shards of clear and dark blue glass were also found in the close vicinity, all of which was located next to a small collapsed wooden structure/box that was once held together with round nails. The isolate was located on the northern edge of an unnamed dirt road running east to west in the northern portion of the Project Area. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt. The isolate is in poor condition with impacts from environmental exposure/erosion and OHV traffic.

***P3b. Resource Attributes:** AH4. Trash Scatter
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5b. Description of Photo: IMG_0720: Glass Bottle Base; (View: North), 10/17/2019, Accession #:15

P5a. Photograph

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

***P8. Recorded by:** John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

***P9. Date Recorded:** 10/17/2019

***P10. Survey Type:** Class III Pedestrian Survey

***P11. Report Citation**: Liss, Paige and John O'Connor. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California.

***Attachments:** ☐ NONE ☒ Location Map
☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

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LOCATION MAP

Primary #
HRI #
Trinomial

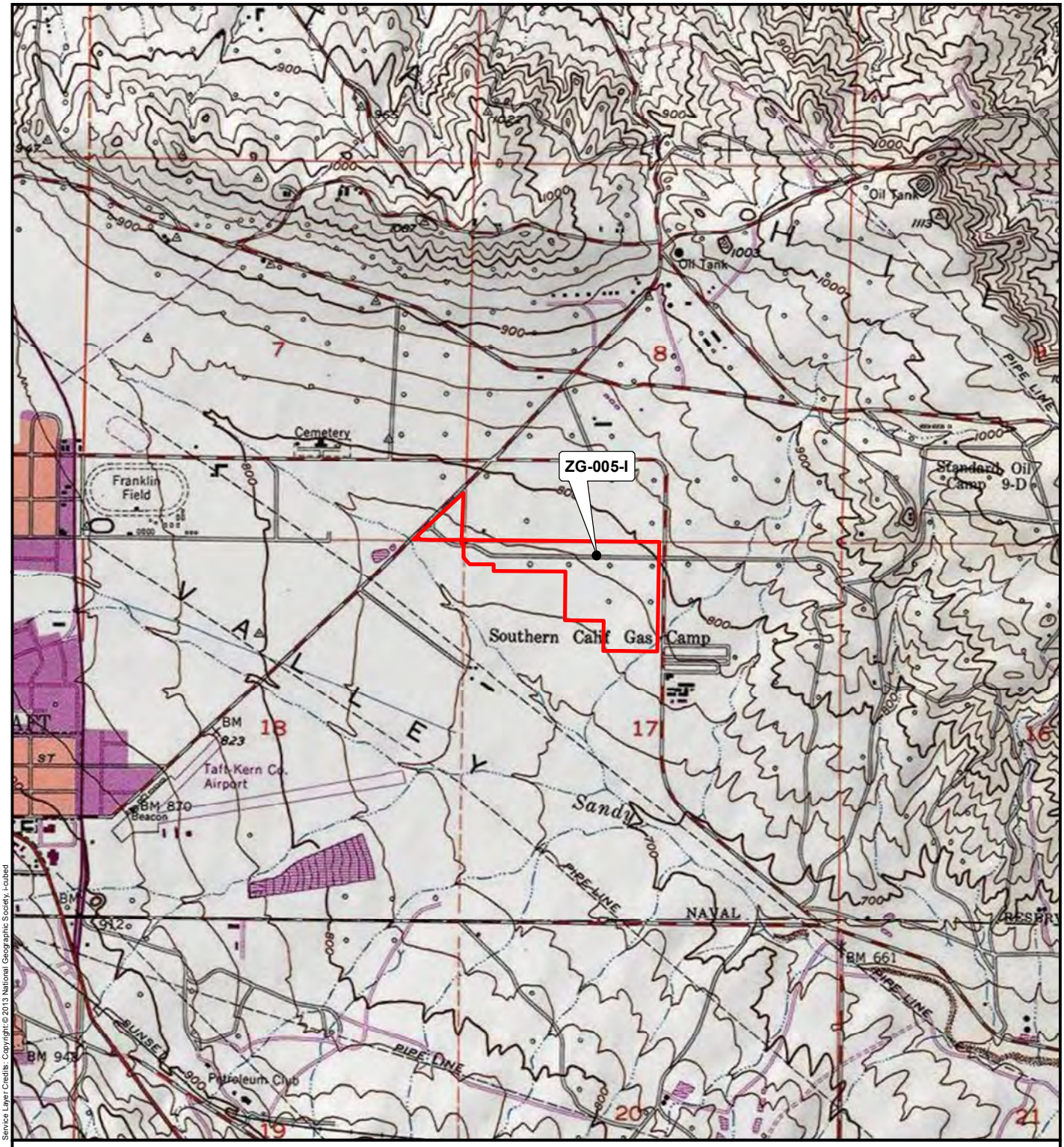
Page X **of** X

***Resource Name or #:** ZG-005-I

***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



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0 250 500 1,000 Meters

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DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

OtherListings
Review Code | Reviewer | Date

 ***Resource Name or #:** ZG-007-I
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted** ***a. County:** Kern
***b. USGS 7.5' Quad**: Taft, Calif. **Date:** 1950 (Photo Revised: 1973) **T** 32S , **R** 24E; NE ¼ **of** NW ¼ **of Sec** 17; **M.D.B.M.**
c. Address: **City:** **Zip:**
d. UTM: Zone 11N, 279104 **mE/** 3892259 **mN**
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east} onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east} onto East Ash Street and drive until the pavement ends near a dog shelter. There will be a fence depiction the boundary of the property for the waste treatment plant on the south. Follow the pedestrian trail along this fence for 0.28 miles and the isolate will be located in the trail.

***P3a. Description:** The isolate consists of a single edge modified unifacial flake. The flake measures 3.5cm length x 2.5cm height x 1.5cm width. The material is a reddish-brown mottled cryptocrystalline silicate (CCS). The isolate was located on a graded dirt trail, less than one meter to the east of an modern fence separating the Project Area from the Waste Disposal Plant on the west. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt. The isolate is in poor condition with impacts from environmental exposure/erosion, pedestrian traffic and proximity to modern fencing.

***P3b. Resource Attributes:** AP2. Lithic Scatter
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5b. Description of Photo: IMG_0731: CCS Flake, (View: North), 10/18/2019, Accession #: 25

P5a. Photograph

***P6. Date Constructed/Age and Source:** ☐ Historic ☒ Prehistoric ☐ Both

***P7. Owner and Address:**
ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

***P8. Recorded by:** John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

***P9. Date Recorded:** 10/18/2019

***P10. Survey Type:** Class III Pedestrian Survey

***P11. Report Citation**: Liss, Paige and John O'Connor. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California.

***Attachments:** ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

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LOCATION MAP

Primary #
HRI #
Trinomial

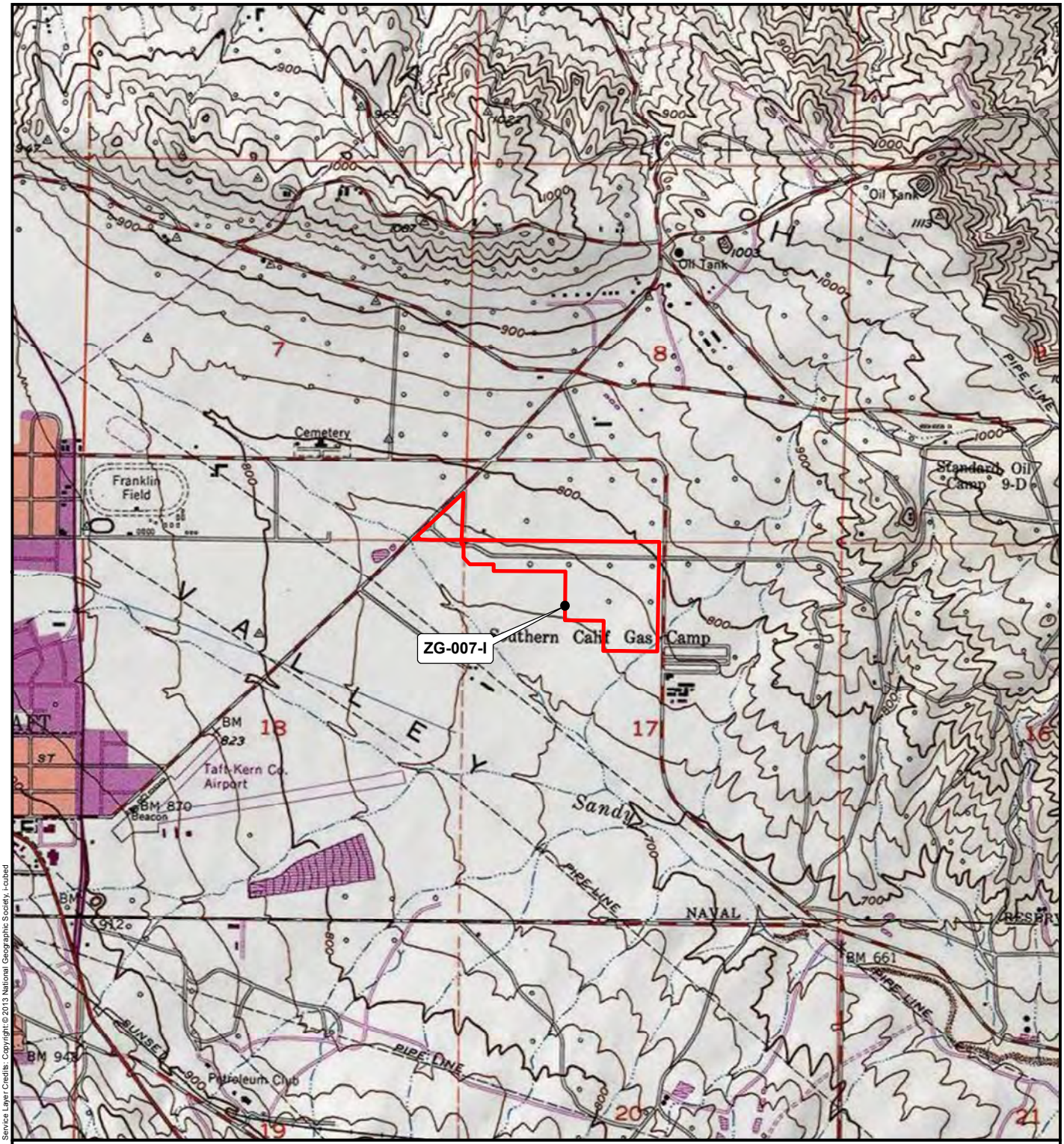
Page X **of** X

***Resource Name or #:** ZG-007-I

***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



*Required Information

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PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

OtherListings
Review Code | Reviewer | Date

 ***Resource Name or #:** ZG-008-I
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted** ***a. County:** Kern
***b. USGS 7.5' Quad**: Taft, Calif. **Date:** 1950 (Photo Revised: 1973) **T** 32S, **R** 24E; NE ¼ **of** NW ¼ **of Sec** 17; **M.D.B.M.**
c. Address: **City:** **Zip:**
d. UTM: Zone 11N, 279104 **mE/** 3892259 **mN**
UTM data was field-collected with Collector for ArcGIS, on iPhone 6.
e. Other Locational Data: From the intersection of Taft Hwy {CA-119 W} and Airport Rd in Taft, CA, drive northeast on Airport Rd for 1.2 miles. Turn a slight left {east} onto East Kern Street and drive 0.2 miles. Continue straight onto Airport Road for 1.5 miles. Turn right {east} onto East Ash Street and drive until the pavement ends near a dog shelter. There will be a fence depiction the boundary of the property for the waste treatment plant on the south. Follow the pedestrian trail along this fence for 0.28 miles. At this point, take a sharp left and walk direct east for approximately 500 ft and the isolate will be reached.

***P3a. Description:** The isolate consists of a single possible projectile point fragment. The point measures 3.5cm length x 2cm height x 1.5cm width. The material is a clear/pink cryptocrystalline silicate (CCS) with small crystal structures forming the base. The point shows utilization on both edges and is bifacially modified. The isolate was located on a patch of pushed asphalt, likely washed down from an unknown source upslope. The site is situated on a gently sloping plain in the Midway Valley, at the foot of the Buena Vista Hills. The site is within a San Joaquin Saltbush vegetation zone; vegetation on-site consists of saltbush, phacelia, and seasonal grasses. Site soils are a grayish-tan sandy silt. The isolate is in poor condition with impacts from environmental exposure/erosion, pedestrian traffic and proximity to modern fencing.

***P3b. Resource Attributes:** AP2. Lithic Scatter
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5b. Description of Photo: IMG_0732: CCS Flake, (View: south, arrow points north), 10/18/2019, Accession #: 27

P5a. Photograph

***P6. Date Constructed/Age and Source:**
☐ Historic ☒ Prehistoric ☐ Both

***P7. Owner and Address:**
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***P8. Recorded by:** John O'Connor, Paige Liss, ECORP Consulting, Inc., 3838 Camino Del Rio North, Ste. 370, San Diego, CA 92108

***P9. Date Recorded:** 10/18/2019

***P10. Survey Type:** Class III Pedestrian Survey

***P11. Report Citation:** Liss, Paige and John O'Connor. 2019. Cultural Resources Inventory Report Gas Company Road Technical Studies Project. Prepared for Z Global. Kern County, California.

***Attachments:** ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

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LOCATION MAP

Primary #
HRI #
Trinomial

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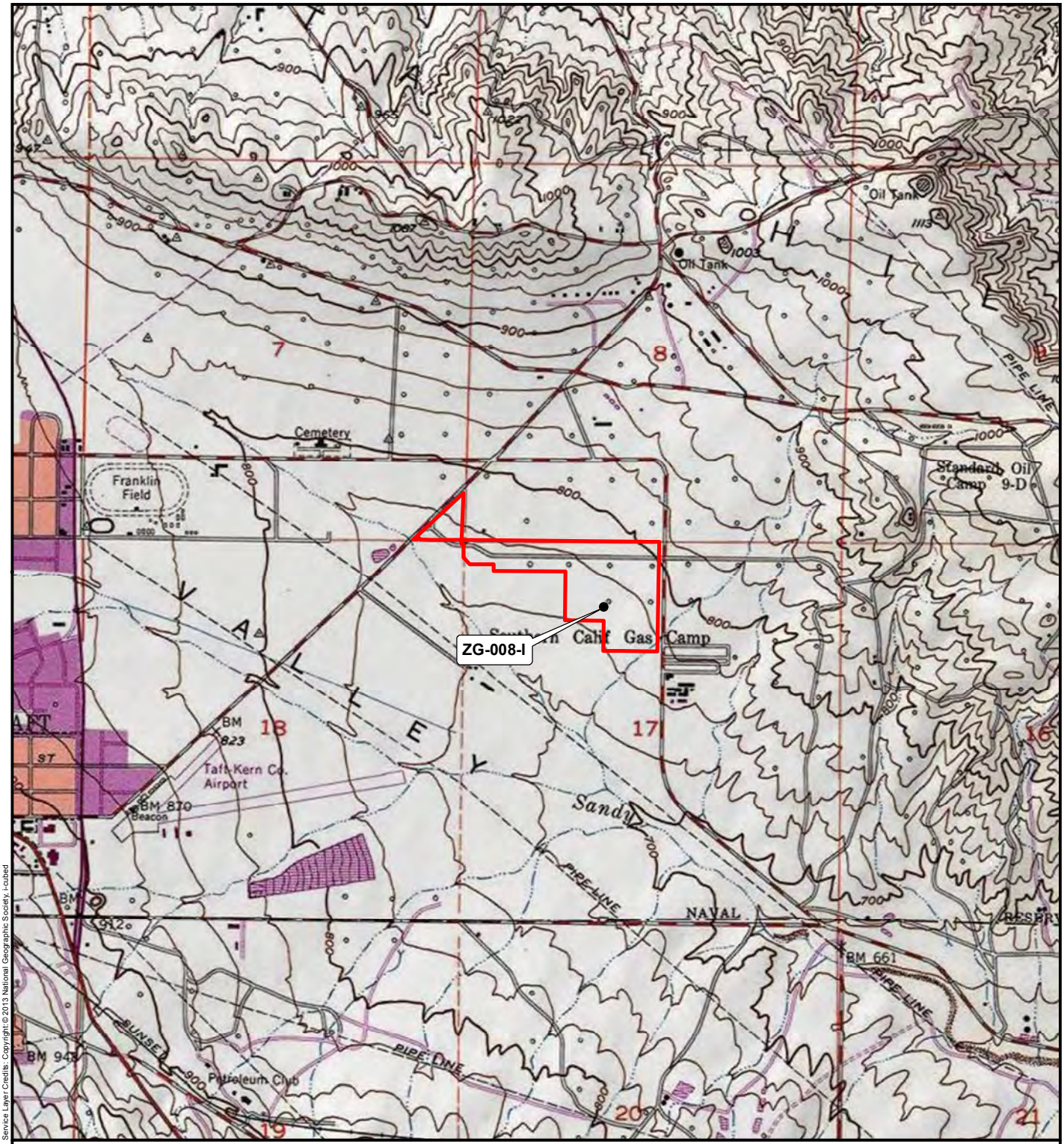
***Map Name:** Taft, CA

***Scale:** 1:24,000

***Date of Map:** 1973



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GEOTECHNICAL ENGINEERING INVESTIGATION REPORT
Z GLOBAL TAFT SOLAR SITE
TAFT, CALIFORNIA

BSK PROJECT G19-213-10B

PREPARED FOR:

Z Global
604 Sutter Street, Suite 250
Folsom, California 95630

November 19, 2019

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT
Z GLOBAL EAGLE SOLAR SITE
TAFT, CALIFORNIA

Prepared for:

Ms. Jamie Nagel
Z Global
604 Sutter Street, Suite 250
Folsom, California 95630

Bakersfield Project: G19-213-10B

November 19, 2019

Prepared by:

Adam Terronez, PE, GE
Bakersfield Branch Manager

On Man Lau, PE, GE
South Valley Regional Manager

BSK Associates
700 22nd Street
Bakersfield, California 93301
(661) 327-0671
(661) 324-4218 FAX

Distribution: Client (Email: [jamie@zglobal.biz])

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1. INTRODUCTION

This report presents the results of a Geotechnical Engineering Investigation Report conducted by BSK Associates (BSK), for the proposed ground mount solar PV system located southeast of the intersection of Airport Road and Ash Street in Taft, California (Site). The Site is located at lot APN 220-240-26-00 in Taft, California as shown on the Site Vicinity Map, Figure A-1. The geotechnical engineering investigation was conducted in accordance with BSK Proposal GB19-18965, dated September 18, 2019.

This report provides a description of the geotechnical conditions at the Site and provides specific recommendations for earthwork and foundation design with respect to the planned structures. In the event that changes occur in the design of the project, this report's conclusions and recommendations will not be considered valid unless the changes are reviewed with BSK and the conclusions and recommendations are modified or verified in writing. Examples of such changes would include location, size of structures, foundation loads, etc.

1.1. Planned Construction

BSK understands that the existing site is located at APN 220-240-26-00 in Taft, California. The proposed site will expand over approximately 53 acres.

The proposed improvements at each site consist of ground mounted solar panels supported on pole-type foundations, such as driven steel pipe piles or steel I-piles. AC electrical equipment will be supported on driven piles, shallow foundations or mat foundations.

In the event that significant changes occur in the design of the proposed improvements, this report's conclusions and recommendations will not be considered valid unless the changes are reviewed with BSK and the conclusions and recommendations are modified or verified in writing.

1.2. Purpose and Scope of Services

The objective of this geotechnical investigation was to characterize the subsurface conditions in the areas of the proposed structures, and provide geotechnical engineering recommendations for the preparation of plans and specifications and bearing and lateral earth pressure conditions. The scope of the investigation included a field exploration, laboratory testing, engineering analyses, and preparation of this report.

2. FIELD INVESTIGATION AND LABORATORY TESTING

2.1. Field Exploration

The field exploration for this investigation was conducted under the oversight of a BSK staff member. Fourteen (14) borings were drilled at the Site on October 7 and October 8, 2019 using a Mobile B-61 Drill Rig provided by Baja Exploration. The borings were drilled to a maximum depth of 41.5 feet beneath the existing ground surface (bgs) and backfilled with the soil cuttings and surrounding soil. Additionally, three (3) percolation tests were conducted in the vicinity.

The soil materials encountered in the borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classification of the materials encountered in the borings were made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented in Appendix A.

Boring logs are presented in Appendix A and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

2.2 Laboratory Testing

Laboratory tests were performed on selected soil samples to evaluate moisture content, dry density, shear strength, collapse potential, moisture-density relationship, fines content, and corrosion characteristics. A description of the laboratory test methods and results are presented in Appendix B.

3. SITE AND GEOLOGY/SEISMICITY CONDITIONS

The following sections address the Site descriptions and surface conditions, regional geology and seismic hazards, subsurface conditions, and groundwater conditions at the Site. This information is based on BSK's field exploration and published maps and reports.

3.1 Site Description and Surface Conditions

The Site is located in a vacant field southeast of the intersection of Airport Road and Ash Street in Taft, California. The surface of the site is a vacant field with dry vegetation and dry silty sand. The Site is located in the north half of the northwest quarter of section 17, Township 32 South, and Range 24 East of the Mount Diablo Meridian. The NAD 83 GPS coordinates for the center of the Site are 35.1503 degrees North latitude and 119.4231 degrees West longitude.

3.2 Regional Geology and Seismic Hazards Assessment

Our Scope of services included a review of published maps and reports to assess the regional geology and potential for seismic hazards.

3.2.1 Regional Geology

The Site is located in the Great Valley. The Great Valley is an alluvial plain about 50 miles wide and 400 miles long in the central part of California. Its northern part is the Sacramento Valley, drained by the Sacramento River and its southern part is the San Joaquin Valley drained by the San Joaquin River. The Great Valley is a trough in which sediments have been deposited almost continuously since the Jurassic (about 160 million years ago). Great oil fields have been found in southernmost San Joaquin Valley and along anticlinal uplifts on its southwestern margin. In the Sacramento Valley, the Sutter Buttes, the remnants of an isolated Pliocene volcano, rise above the valley floor.

3.2.2 Seismic Hazards Assessment

The types of geologic and seismic hazards assessed include surface ground fault rupture, liquefaction, and slope failure.

The purpose of the Alquist-Priolo Geologic Hazards Zones Act, as summarized in CDMG Special Publication 42 (SP 42), is to "prohibit the location of most structures for human occupancy across the traces of active faults and to mitigate thereby the hazard of fault-rupture." As indicated by SP 42, "the State Geologist is required to delineate "earthquake fault zones" (EFZs) along known active faults in California. Cities and counties affected by the zones must regulate certain development 'projects' within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

The Site is not located in a Alquist-Priolo (A-P) Fault Hazard Zone. The closest A-P Hazard Zone fault is the Buena Vista fault, located approximately 0.8 miles north of the Site and the San Andreas fault zone approximately 10.6 miles southwest of the site.

Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where Site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements. There are no mapped areas that have Seismic Hazard Zones in the project area.

3.3 Subsurface Conditions

The subsurface material generally consisted of fine to coarse grained silty sand with clay and sandy clay in the upper 5 feet. The material varies from silty sand with clay, clayey silty sand, sandy clay, and clay through out to the bottom of the boreholes.

Based on the results of the consolidation test, the on-site soils below 5 feet are considered to have a low potential for hydrocompaction.

The upper 5 feet of material is anticipated to have low potential for expansion with an expansion index of 25 at Boring B-8.

The boring logs in Appendix A provide a more detailed description of the materials encountered, including the applicable Unified Soil Classification System symbols.

3.4 Groundwater Conditions

Groundwater was not encountered at the time of drilling on October 7 and October 8, 2019. Based on the groundwater elevation data from the California Department of Water Resources (DWR), the historic high groundwater depth in the vicinity was recorded to be 610.5 feet bgs on February 24, 2015 from State Well with Site Code 351372N1194175W002 located approximately 0.98 miles southeast of the site.

Please note that the groundwater level may fluctuate both seasonally and from year to year due to variations in rainfall, temperature, pumping from wells and possibly as the result of other factors such as irrigation, that were not evident at the time of our investigation.

4. CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the soil conditions would not preclude the construction of the proposed improvements.

The proposed improvements may be supported on shallow foundations, mat foundations or driven piles if the recommendations presented herein are incorporated into the design and construction of the project. The contractor should be advised that very dense soils are present at the site and to anticipate difficult pile driving.

4.1 Seismic Design Criteria

Based on Section 1613.3.2 of the 2016 California Building Code (CBC), the Site shall be classified as Site Class A, B, C, D, E or F based on the Site soil properties and in accordance with Chapter 20 of ASCE 7-10. Based on the "N" values from our soil Borings, as per Table 20.3-1 of ASCE 7-10, the Site is Class D ($15 \leq N \leq 50$).

The 2016 California Building Code (CBC) utilizes ground motion based on the Risk-Targeted Maximum Considered Earthquake (MCER) that is defined in the 2016 CBC as the most severe earthquake effects considered by this code, determined for the orientation that results in the largest maximum response to horizontal ground motions and with adjustment for targeted risk. Ground motion parameters in the 2016 CBC are based on ASCE 7-10, Chapter 11.

The United States Geologic Survey (USGS) has prepared maps presenting the Risk-Targeted MCE spectral acceleration (5 percent damping) for periods of 0.2 seconds (SS) and 1.0 seconds (S1). The values of SS and S1 can be obtained from the OSHPD Seismic Design Maps Application available at: https://seismicmaps.org/.

The OSHPD Seismic Design Maps Application and Chapter 16 of the 2016 CBC based on ASCE 7-10 produced the spectral acceleration parameters risk targeted maximum considered earthquake values in Table 1 based on Site Class D conditions.

As per Section 1803.5.12 of the CBC, peak ground acceleration (PGA) utilized for dynamic lateral earth pressures and liquefaction, shall be based on a site-specific study (ASCE 7-10, Section 21.5) or ASCE 7-10, Section 11.8.3. The OSHPD Seismic Design Maps Application and based on ASCE 7-10, Section 11.8.3 produced the Geometric Mean PGA value in Table 1 based on Site Class D conditions.

Table 1: Seismic Design Parameters			
Seismic Design Parameter	**2016 CBC Value**		**Reference**
MCE Mapped Spectral Acceleration (g)	S_S = 1.500	S_1 = 0.600	USGS Mapped Value
Amplification Factors (Site Class D)	F_a = 1.000	F_v = 1.500	Table 1613.3.3
Site Adjusted MCE Spectral Acceleration (g)	S_{MS} = 1.500	S_{M1} = 0.900	Equations 16-37, 38
Design Spectral Acceleration (g)	S_{DS} = 1.000	S_{D1} = 0.600	Equations 16-39, 40
Geometric Mean PGA (g)	PGA = 0.500		ASCE Equations 11.8-1

As shown above, the short period design spectral response acceleration coefficient, S_{DS}, is greater than 0.50, therefore the Site lies in Seismic Design Category D as specified in Section 1613.3.5 of the 2016 CBC. The long period design spectral response acceleration coefficient, S_{D1}, is greater than 0.2, therefore the Site lies in Seismic Design Category D as specified in Section 1613.3.5 of the 2016 CBC. In accordance with the 2016 CBC, each structure shall be assigned to the more severe seismic design category in accordance with Table 1613.3.5(1) or 1613.3.5(2), irrespective of the fundamental period of vibration of the structure.

4.2 Soil Corrosivity

Surface soil samples obtained from the Site were tested to provide a preliminary screening of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts. The test results are presented in Appendix B.

The corrosivity evaluations were performed by BSK on soil samples obtained at the time of drilling. The soil was evaluated for minimum resistivity (ASTM G57), pH (ASTM D4972), and soluble sulfate and chlorides (CT 417 and CT 422). At Boring B-5, the minimum resistivity was 1,700 ohm-cm, pH was 7.2, sulfate was not detected, and chloride was detected at 25 parts per million (ppm). At Boring B-13, the minimum resistivity was 3,100 ohm-cm, pH was 7.0, sulfate was not detected, and chloride was detected at 25 ppm.

The water-soluble sulfate content severity class is considered negligible to concrete (Exposure Category S0 per Table 19.3.1.1 of ACI 318-14). Representative samples of the Site soil have a minimum resistivity ranging from 3,100 to 1,700 ohm-cm which is considered moderately corrosive to severely corrosive to buried metal conduit. Therefore, buried metal conduits, ferrous metal pipes, and exposed steel should have a protective coating in accordance with the manufacturer's specification.

4.3 Site Preparation Recommendations

The following procedures must be implemented during Site preparation for the proposed Site improvements. References to maximum dry density, optimum moisture content, and relative compaction are based on ASTM D 1557 (latest test revision) laboratory test procedures.

1. The areas of proposed improvements must be cleared of surface vegetation and debris. Materials resulting from the clearing and stripping operations must be removed and properly disposed of off-site. In addition, all undocumented fills should be removed where encountered and where fills or structural improvements will be placed. Following stripping and removal operations, BSK recommends scarification and recompaction of the upper 12 inches prior to fill placement. Engineered fill should be placed below shallow foundations a minimum depth of two (2) feet below existing or planned foundation elevation, whichever is greater. Yielding areas should be observed by the geotechnical consultant and removed and recompacted if necessary.
2. Compacted fills should be compacted to a minimum of 90 percent of maximum dry density. We recommend that non-expansive soil be used in the upper 12 inches below the bottom surface of concrete slabs.
3. Following the required stripping and overexcavation, the exposed ground surface must be inspected by the Geotechnical Engineer to evaluate if loose or soft zones are present that will require over excavation.
4. Imported soil or native excavated soils, free of organic materials or deleterious substances, may be placed as compacted engineered fill. The material must be free of oversized fragments greater than 3-inches in greatest dimension. Engineered fill underneath and extending 5 feet beyond the building foundation and must be placed in uniform layers not exceeding 8-inches in loose thickness, moisture conditioned to within 2 to 4 percent above optimum moisture content, and compacted to at least 90 percent relative compaction. Engineered fill placed on fill slopes must be placed in uniform layers not exceeding 8-inches in loose thickness, moisture conditioned to within 2 percent of optimum moisture content, and compacted to at least 90 percent of relative compaction.
5. BSK must be called to the site to verify the import material properties through laboratory testing.
6. If possible, earthwork operations should be scheduled during a dry, warm period of the year. Should these operations be performed during or shortly following periods of inclement weather, unstable soil conditions may result in the soils exhibiting a “pumping” condition. This condition is caused by excess moisture in combination with moving construction equipment, resulting in saturation and zero air voids in the soils. If this condition occurs, the adverse soils will need to be over-excavated to the depth at which stable soils are encountered, and replaced with suitable soils compacted as engineered fill. Alternatively, the Contractor may proceed with grading operations after utilizing a method to stabilize the soil subgrade, which should be subject to review and approval by BSK prior to implementation.
7. Import fill materials must be free from organic materials or deleterious substances. The project specifications must require the contractor to contact BSK to review the proposed import fill materials for conformance with these recommendations at least one week prior to importing to the Site, whether from on-site or off-site borrow areas. Imported fill soils must be non-hazardous and derived from a single, consistent soil type source conforming to the following criteria:

Plasticity Index:	< 12
Expansion Index:	< 20 (Very Low Expansion Potential)
Maximum Particle Size:	3 inches
Percent Passing #4 Sieve:	65 - 100
Percent Passing #200 Sieve:	20 - 45
Low Corrosion Potential:	Soluble Sulfates < 1,500 ppm
	Soluble Chlorides < 150 ppm
	Minimum Resistivity > 3,000 ohm-cm

4.4 Foundations

Provided the recommendations contained in this report are implemented during design and construction, it is our opinion that the structures can be supported on shallow foundations, mat foundations or driven piles. A structural engineer should evaluate reinforcement, embedment depth based on the requirements for the structural loadings, shrinkage and temperature stresses.

4.4.1 Shallow Foundations

Continuous and isolated spread footings must have a minimum width of 12 inches and 24 inches, respectively. Continuous and isolated spread footing foundations may be designed using a net allowable bearing pressure of 3,000 pounds per square foot (psf). The net allowable bearing pressure applies to the dead load plus live load (DL + LL) condition; it may be increased by 1/3 for wind or seismic loads. Total foundation settlements are expected to be less than 0.5 inches and differential settlements between similarly loaded (DL + LL) and sized footings are anticipated to be less than 0.25 inches. Differential settlement of continuous footings, expressed in terms of angular distortion, is estimated to be approximately 1/600.

4.4.2 Mat Foundations

We understand that the structure may be supported on a concrete mat foundation. The mat foundation may be designed to impose a maximum allowable pressure of 3,000 pounds per square foot (psf) due to dead plus live loads. This value may be increased by one-third for transient loads such as seismic or wind. The concrete mat foundation should be embedded at least 8 inches below the lowest adjacent grade.

Settlements: Based on the results of our laboratory tests and analyses, total static settlements of the mat foundation under the allowable bearing pressure are expected to be approximately 1-inch, and maximum differential settlements are expected to be about 1/2-inch.

4.4.3 Pole Type Foundations

It is anticipated that the structures will be supported on driven piles. This type of foundation should be designed in accordance with Section 1807.3.2 of the 2016 CBC. However, it is recommended that an allowable lateral soil bearing pressure of 190 psf per foot of embedment be used to develop parameters S_1 and S_3 rather than one of the values given in Table 1806.2. This value includes a factor of safety of 2. The upper foot of soil should be ignored when calculating the minimum embedment depth. The allowable lateral bearing pressure includes a factor of 2 and may be doubled according to the CBC

Section 1806.3.4 for pole type foundations not adversely affected by ½ inch of movement at the ground surface. The lateral bearing pressure is permitted to be increased by 1/3 where used with the alternative basic load combinations of CBC Section 1605A.3.2 that include wind or earthquake loads. The lateral bearing pressure shall be permitted to be increased for each additional foot of embedment up to a maximum of 8 times the allowable bearing pressure.

Pole-type foundations may be designed for an allowable end bearing pressure of 2,000 psf (includes a factor of safety of 3) for a minimum pier length of 6 feet. To support vertical loads applied to the pile foundations, an allowable static downward skin friction value of 250 psf may be used, which includes a factor of safety of 1.5, per the 2016 CBC. End bearing and skin friction may be increased by 1/3 for short term loading. The total settlement of pole foundations designed in accordance with these recommendations should not exceed one-half inch.

Where uplift is due to wind or seismic loading, an allowable skin friction of 250 psf may be used, which includes a factor of safety of 1.5, to resist transient uplift loads, per the 2016 CBC. Skin friction may be increased by 1/3 for short term loading. The weight of the pile may be taken into consideration when determining resistance to uplift loads.

Please note, the outside perimeter of the pile may be used in skin friction calculation and the upper 1 (one) foot of soil should be neglected.

We have provided the modulus of subgrade reaction, 125 pci, for the structural designers to use in their LPILE analysis. We recommend using the Sand (Reese et al., 1974) option for the p-y curve soil model in the Soil Layers dialog box for site. The following soil parameters may be used in the analysis:

Table 2: LPILE Input Parameters

Soil Type	Silty Sand
p-y curve model	Sand (Reese et al., 1974)
Effective Unit Weight, pcf	120
Friction Angle, ϕ, degrees	34
Elastic Subgrade Reaction, pci	125

4.5 Lateral Earth Pressures and Frictional Resistance

Provided the Site is prepared as recommended above, the following earth pressure parameters for footings may be used for design purposes. The parameters shown in the table below are for drained conditions of select engineered fill or undisturbed native soil.

Table 3: Recommended Static Lateral Earth Pressures for Footings	
Lateral Pressure Condition	**Equivalent Fluid Density (pcf) Drained Condition**
Active Pressure	30
At Rest Pressure	50
Passive Pressure	400

The lateral earth pressures listed herein are obtained by the conventional equation for active, at rest, and passive conditions assuming level backfill and a bulk unit weight of 120 pcf for the Site soils. A coefficient of friction of 0.35 may be used between soil sub-grade and the bottom of footings.

The coefficient of friction and passive earth pressure values given above represent ultimate soil strength values. BSK recommends that a safety factor consistent with the design conditions be included in their usage in accordance with Sections 1806.3.1 through 1806.3.3 of the 2016 CBC. For stability against lateral sliding that is resisted solely by the passive earth pressure against footings or friction along the bottom of footings, a minimum safety factor of 1.5 is recommended. For stability against lateral sliding that is resisted by combined passive pressure and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral stability against seismic loading conditions, a minimum safety factor of 1.2 is recommended.

4.6 Excavation Stability

Soils encountered within the depth explored are generally classified as Type C soils in accordance with OSHA (Occupational Safety and Health Administration). The slopes surrounding or along temporary excavations may be vertical for excavations that are less than five feet deep and exhibit no indication of potential caving, but should be no steeper than 1.5H:1V for excavations that are deeper than five feet, up to a maximum depth of 15 feet. Certified trench shields or boxes may also be used to protect workers during construction in excavations that have vertical sidewalls and are greater than 5 feet deep. Temporary excavations for the project construction should be left open for as short a time as possible and should be protected from water runoff. In addition, equipment and/or soil stockpiles must be maintained at least 10 feet away from the top of the excavations. Because of variability in soils, BSK must be afforded the opportunity to observe and document sloping and shoring conditions at the time of construction. Slope height, slope inclination, and excavation depths (including utility trench excavations) must in no case exceed those specified in local, state, or federal safety regulations, (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations).

4.7 Trench Backfill and Compaction

Processed on-Site soils, which are free of organic material, are suitable for use as general trench backfill above the pipe envelope. Native soil with particles less than three inches in the greatest dimension may be incorporated into the backfill and compacted as specified above, provided they are properly mixed into a matrix of friable soils. The backfill must be placed in thin layers not exceeding 12 inches in loose thickness, be well-blended and consistent texture, moisture conditioned to at least optimum moisture content, and compacted to at least 90 percent of the maximum dry density as determined by the ASTM D1557. The uppermost 12 inches of trench backfill below pavement sections must be compacted to at

least 95 percent of the maximum dry density as determined by ASTM D1557. Moisture content within two percent of optimum must be maintained while compacting this upper 12-inch trench backfill zone.

We recommend that trench backfill be tested for compliance with the recommended Relative Compaction and moisture conditions. Field density testing should conform to ASTM Test Methods D1556 or D6938. We recommend that field density tests be performed in the utility trench bedding, envelope and backfill for every vertical lift, at an approximate longitudinal spacing of not greater than 150 feet. Backfill that does not conform to the criteria specified in this section should be removed or reworked, as applicable over the trench length represented by the failing test so as to conform to BSK recommendations.

4.8 Drainage Considerations

The control surface drainage in the project areas is an important design consideration. BSK recommends that final grading around shallow foundations must provide for positive and enduring drainage away from the structures, and ponding of water must not be allowed around, or near the shallow foundations. Ground surface profiles next to the shallow foundations must have at least a 2 percent gradient away from the structures.

4.9 Percolation

The percolation testing was conducted by a BSK staff member on October 8, 2019. Three (3) percolation tests were conducted in each test hole. The Percolation Test locations can be found on Figure A-2: Boring and Percolation Test Location Map. The last three readings from slowest the percolation tests are averaged to calculate the percolation rates. The results of the percolation tests are presented on Figures B-11 through B-13 and in the table below.

Table 4: Summary of Percolation Test Results

Test Location	Plumbing Code Soil Type	Soil Description	Percolation Rate (minute/inch)
PT-1	2	Sand	2.00
PT-2	1	Sand	0.67
PT-3	1	Sand	0.69

BSK recommends the longer percolation test result be used for design purposes. In addition, per Kern County guidelines BSK recommends an infiltration rate of 10 percent of the percolation rate (BSK Associates, 1992) be used for system evaluation.

5. PLANS AND SPECIFICATIONS REVIEW

BSK recommends that it be retained to review the draft plans and specifications for the project, with regard to foundations and earthwork, prior to their being finalized and issued for construction bidding.

6. CONSTRUCTION TESTING AND OBSERVATIONS

Geotechnical testing and observation during construction is a vital extension of this geotechnical investigation. BSK recommends that it be retained for those services. Field review during Site preparation and grading allows for evaluation of the exposed soil conditions and confirmation or revision of the assumptions and extrapolations made in formulating the design parameters and recommendations. BSK's observations must be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. BSK must also be called to the Site to observe foundation excavations, prior to placement of reinforcing steel or concrete, in order to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report. BSK must also be called to the Site to observe placement of foundation and slab concrete.

If a firm other than BSK is retained for these services during construction, then that firm must notify the owner, project designers, governmental building officials, and BSK that the firm has assumed the responsibility for all phases (i.e., both design and construction) of the project within the purview of the Geotechnical Engineer. Notification must indicate that the firm has reviewed this report and any subsequent addenda, and that it either agrees with BSK's conclusions and recommendations, or that it will provide independent recommendations.

7. LIMITATIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the Borings performed at the locations shown on the Boring Location Map, Figure A-2. The report does not reflect variations which may occur between or beyond the Borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-Site observations during the excavation period and noting the characteristics of the variations.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observation program during the construction phase. BSK assumes no responsibility for construction compliance with the design concepts or recommendations unless it has been retained to perform the testing and observation services during construction as described above.

The findings of this report are valid as of the present. However, changes in the conditions of the Site can occur with the passage of time, whether caused by natural processes or the work of man, on this property or adjacent property. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, governmental policy or the broadening of knowledge.

BSK has prepared this report for the exclusive use of the Client and members of the project design team. The report has been prepared in accordance with generally accepted geotechnical engineering practices which existed in Kern County at the time the report was written. No other warranties either expressed

or implied are made as to the professional advice provided under the terms of BSK's agreement with Client and included in this report.

8. REFERENCES

Department of Water Resources. http://www.water.ca.gov/waterdatalibrary/, Water Data Library, November 2019.

Earth Point. http://earthpoint.us/townships.aspx, Public Land Survey System, Google Earth, 2019 November 2019.

Lee, Norman. California Geomorphic Provinces (2012): n. pag. California Department of Conservation. California Geological Survey.<http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_36/Documents/note_36.pdf>. November 2019.

United States Geological Survey/OSHPD, U.S. Seismic Design Maps, https://seismicmaps.org/. November 2019.

APPENDIX A

FIELD EXPLORATION

APPENDIX A
FIELD EXPLORATION

The field exploration for this investigation was conducted under the oversight of a BSK staff member. Fourteen (14) borings were drilled at the Site on October 7 and October 8, 2019 using a Mobile B-61 Drill Rig provided by Baja Exploration. The borings were drilled to a maximum depth of 41.5 feet beneath the existing ground surface (bgs) and backfilled with the soil cuttings and surrounding soil.

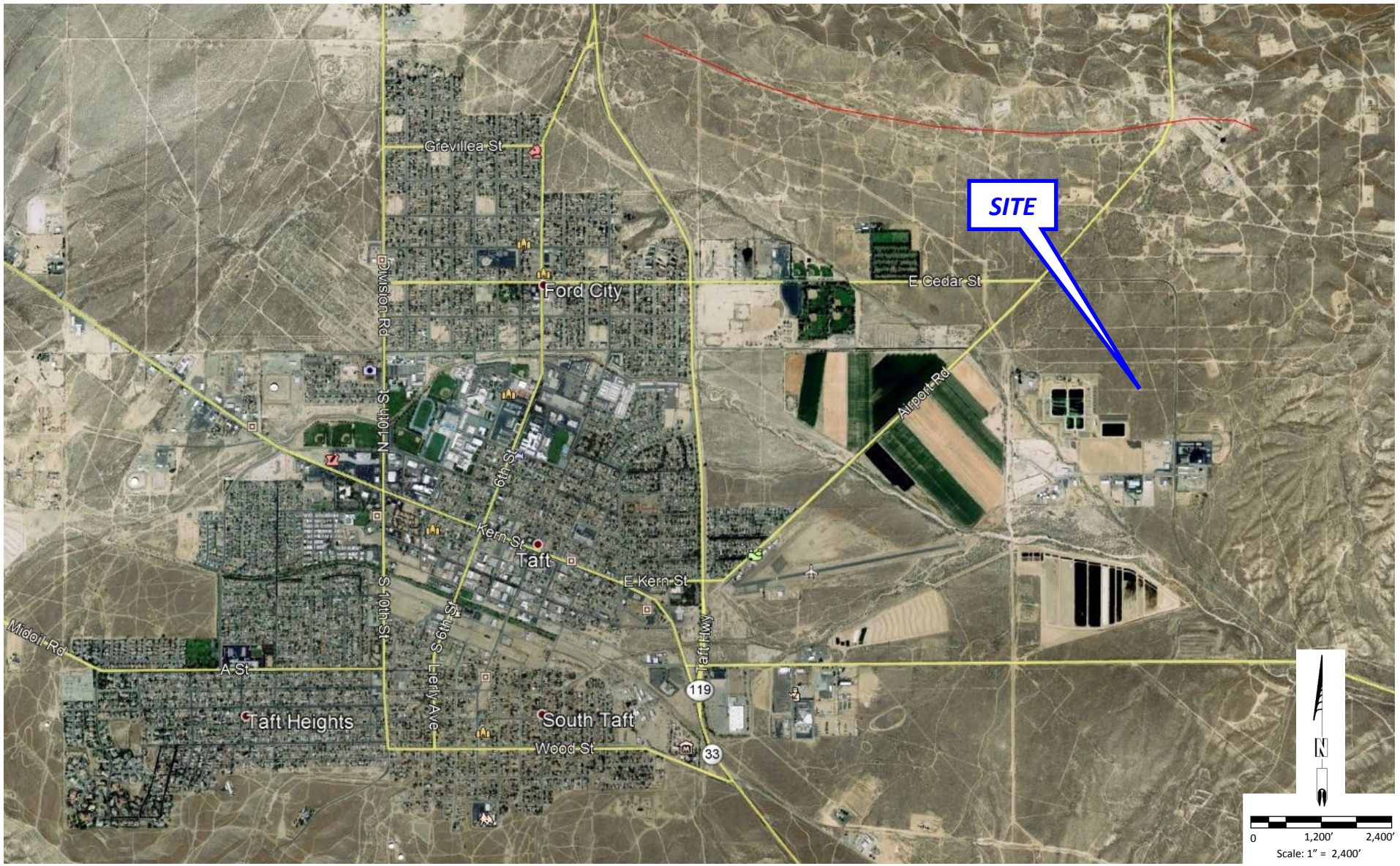
The soil materials encountered in the test borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classification of the materials encountered in the test borings was made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented herein. Boring logs are presented herein and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

Subsurface samples were obtained at the successive depths shown on the boring logs by driving samplers which consisted of a 2.5-inch inside diameter (I.D.) California Sampler and a 1.4-inch I.D. Standard Penetration Test (SPT) Sampler. The samplers were driven 18 inches using a 140-pound hammer dropped from a height of 30 inches by means of either an automatic hammer or a down-hole safety hammer. The number of blows required to drive the last 12 inches was recorded as the blow count (blows/foot) on the boring logs. The relatively undisturbed soil core samples were capped at both ends to preserve the samples at their natural moisture content. Soil samples were also obtained using the SPT Sampler lined with metal tubes or unlined in which case the samples were placed and sealed in polyethylene bags. At the completion of the field exploration, the test borings were backfilled with the excavated soil cuttings.

It should be noted that the use of terms such as “loose”, “medium dense”, “dense” or “very dense” to describe the consistency of a soil is based on sampler blow count and is not necessarily reflective of the in-place density or unit weight of the soils being sampled. The relationship between sampler blow count and consistency is provided in the following Tables A-1 and A-2 for coarse-grained (sandy and gravelly) soils and fine grained (silty and clayey) soils, respectively.

Table A-1: Consistency of Coarse-Grained Soil by Sampler Blow Count		
Consistency Descriptor	**SPT Blow Count (#Blows / Foot)**	**2.5" I.D. California Sampler Blow Count (#Blows / Foot)**
Very Loose	<4	<6
Loose	4 – 10	6 – 15
Medium Dense	10 – 30	15 – 45
Dense	30 – 50	45 – 80
Very Dense	>50	>80

Table A-2: Consistency of Fine-Grained Soil by Sampler Blow Count		
Consistency Descriptor	**SPT Blow Count (#Blows / Foot)**	**2.5" I.D. California Sampler Blow Count (#Blows / Foot)**
Very Soft	<2	<3
Soft	2 – 4	3 – 6
Medium Stiff	4 – 8	6 – 12
Stiff	8 – 15	12 – 24
Very Stiff	15 – 30	24 – 45
Hard	>30	>45



REFERENCE IMAGE: Google Earth 2019

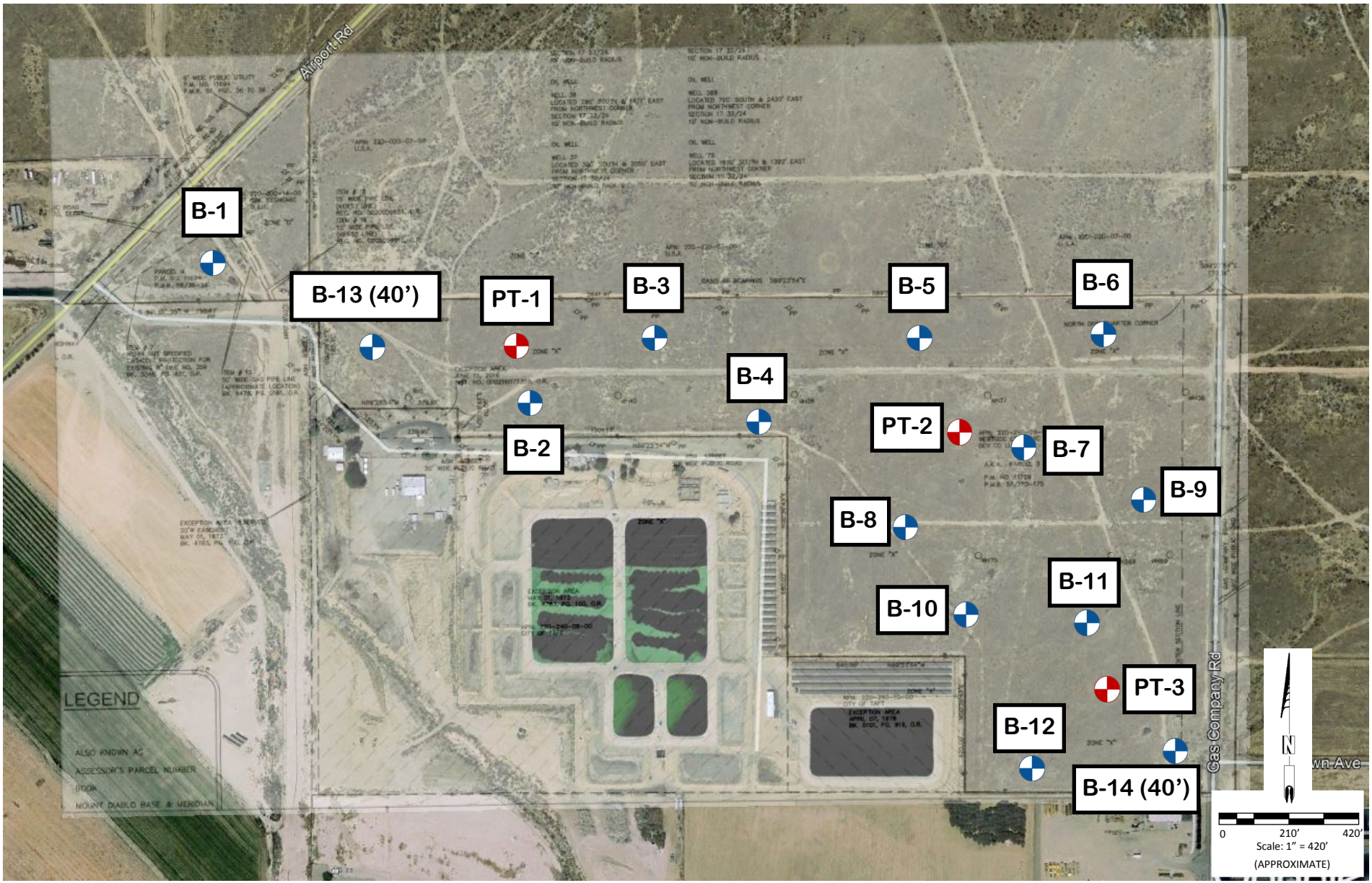
BSK ASSOCIATES
700 22nd Street
Bakersfield, California 93301
Tel. (661) 327-0671

SITE VICINITY MAP

Z Global Taft Solar Site
APN 220-240-26-00
Taft, California

FIGURE A-1

JOB NO. G19-213-10B
DATE October 2019
DR. BY YX
CH. BY AXT
SCALE AS SHOWN
SHEET NO. 1 OF 1 SHEETS



REFERENCE IMAGE: Google Earth 2019

LEGEND:

APPROXIMATE BORING LOCATION B-1

APPROXIMATE PERCOLATION LOCATION PT-1

BSK ASSOCIATES
700 22nd Street
Bakersfield, California 93301
Tel. (661) 327-0671

BORING LOCATION MAP

Z Global Taft Solar Site
APN 220-240-26-00
Taft, California

FIGURE A-2

JOB NO. G19-213-10B

DATE October 2019

DR. BY YX

CH. BY AXT

SCALE AS SHOWN

SHEET NO. 1 OF 1 SHEETS

MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS More than Half >#200	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL- SAND MIXTURES
		GRAVELS WITH OVER 15% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 15% FINES	SM	SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS More than Half <#200 sieve	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS , MICACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

Note: Dual symbols are used to indicate borderline soil classifications.

	Pushed Shelby Tube	RV	R-Value
	Standard Penetration Test	SA	Sieve Analysis
	Modified California	SW	Swell Test
	Auger Cuttings	TC	Cyclic Triaxial
	Grab Sample	TX	Unconsolidated Undrained Triaxial
	Sample Attempt with No Recovery	TV	Torvane Shear
CA	Chemical Analysis	UC	Unconfined Compression
CN	Consolidation	(1.2)	(Shear Strength, ksf)
CP	Compaction	WA	Wash Analysis
DS	Direct Shear	(20)	(with % Passing No. 200 Sieve)
PM	Permeability		Water Level at Time of Drilling
PP	Pocket Penetrometer		Water Level after Drilling (with date measured)

SOIL CLASSIFICATION CHART AND KEY TO TEST DATA
Unified Soil Classification System

BSK ASSOCIATES

Figure A-3

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Telephone: (661) 327-0671
Fax: (661) 324-4218

LOG OF BORING NO. B-01

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, subangular.										
		...loose.			14			115	4			
5		...medium dense, with clay, trace white streaks.			16				5			
		...trace fine gravel, subangular, no white streaks.										
10		...medium dense.			36			112	5			
15		**SC: CLAYEY SAND:** light yellowish brown, fine to coarse grained, dry, very dense, trace fine gravel, subangular, slightly cemented.			38, 50/ 5"			111	10			
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

GEO_TARGET BORING LOGS Z GLOBAL TAFT.GPJ GEOTECHNICAL 08.GDT 11/18/19

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Fax: (661) 324-4218

LOG OF BORING NO. B-02

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SC: SILTY CLAYEY SAND: light brown with white streaks, fine to medium grained, dry, slightly cemented.										
					27, 50/ 5"			106	8			
		...very dense.										
		...moderately cemented.										
5					45			127	4			
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, dense, subangular, trace clay, trace < 1mm pin holes.										
		SM: CLAYEY SILTY SAND: light yellowish brown, fine to coarse grained, dry, dense, subangular, trace < 1mm pin holes, trace white mottle, slightly cemented.										
10					65			116	5			
		SC: CLAYEY SAND: light yellowish brown, fine to coarse grained, dry, dense, subangular, trace white mottle, slightly cemented.										
15					56			98	13			
		CL: SILTY CLAY: light brown, dry, dense, trace fine sand, slightly cemented, decrease in sand with depth.										
		End of boring.										
20												
25												

Completion Depth:	16.5	**Drilling Equipment:**	Mobile B-61
Date Started:	10/7/19	**Drilling Method:**	Hollow Stem Auger
Date Completed:	10/7/19	**Drive Weight:**	140 pounds
California Sampler:	2.4" inner diameter	**Hole Diameter:**	8 inches
SPT Sampler:	1.4" inner diameter	**Drop:**	30 inches
		Remarks:	Borings backfilled with cuttings

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Fax: (661) 324-4218

LOG OF BORING NO. B-03

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SC: CLAYEY SAND: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular.										
					18			113	4			
		...medium dense.										
5					60			108	11			
		CL: SANDY CLAY: light brown with white mottle, fine to medium grained sand, dry, hard, trace silt.										
10					47			106	7			
		SM: CLAYEY SM: light yellowish brown, fine to coarse grained, dry, dense, subangular.										
		CL: SANDY SILTY CLAY: light brown, dry, fine to medium grained sand, hard.										
		End of boring due to difficult drilling.										
15												
20												
25												

Completion Depth: 12.0
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

GEO_TARGET BORING LOGS Z GLOBAL TAFT.GPJ GEOTECHNICAL 08.GDT 11/18/19

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Telephone: (661) 327-0671
Fax: (661) 324-4218

LOG OF BORING NO. B-04

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: CLAYEY SILTY SAND: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular, trace white streaks.										
					68			116	4			
		...dense.										
5												
					59			99	8			
		...dense, no fine gravel, no white streaks.										
		SC: CLAYEY SAND: light brown, fine to medium grained, dry, dense, trace white mottle.										
10												
					61			107	8			
		CL: SILTY CLAY w/ SAND: light brown, dry, fine to medium grained sand, hard, subangular.										
15												
					54			104	11			
		CL: SILTY CLAY: light brown, dry, hard.										
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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Fax: (661) 324-4218

LOG OF BORING NO. B-05

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular, trace clay.					34					
		...loose.			6				5			
5		...medium dense, no fine gravel.			42			121	6			
		SM: CLAYEY SILTY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, subangular.										
10		**SM: SILTY SAND:** light yellowish brown, fine to medium sand, dry, very dense, trace clay.			30, 50/ 5"			127	2			
		...trace fine gravel, subangular.										
15		...very dense, trace fine gravel, increase in fines, moderately cemented.			20, 50/ 5"			114	8			
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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Fax: (661) 324-4218

LOG OF BORING NO. B-06

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, trace clay.										
					12			113	4			
		...loose.										
5					43			115	5			
		...medium dense, trace fine gravel, subangular, no trace clay.										
10					12, 50/ 6"			110	8			
		SC: CLAYEY SAND: light yellowish brown, fine to medium sand, dry, very dense, trace fine gravel, subangular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular, slightly cemented.										
		End of boring due to difficult drilling.										
15												
20												
25												

Completion Depth: 13.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-07

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: CLAYEY SILTY SAND: light yellowish brown, fine to medium grained, dry, trace fine gravel, subangular.										
		...medium dense.			20			109	7			
		SC: SILTY CLAYEY SAND: light brown, fine to medium grained, dry, medium dense.										
5					14			113	5			
		SM: SILTY SAND w/ CLAY: light yellowish brown, fine to coarse grained, dry, loose, subangular. ...silty sand, trace clay.										
10					46							
		SM: SILTY SAND: light yellowish brown, fine to medium sand, dry, dense, trace clay. **SM: CLAYEY SILTY SAND:** light yellowish brown, fine to medium sand, dry, dense, slightly cemented.										
15					48			120	3			
		SM: SILTY SAND: light yellowish brown, fine to coarse sand, dry, dense, subangular.										
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-08

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		CL: SANDY CLAY: light yellowish brown, fine to medium grained sand, dry.					43					
					38			117	5			
		CL: SANDY SILTY CLAY: light yellowish brown, fine to medium grained sand, dry, very stiff, trace fine gravel, subangular.										
5		**SC: SILTY CLAYEY SAND:** light yellowish brown, fine to medium grained, dry, very stiff, trace fine gravel, subangular.										
					15			107	5			
		SC: SILTY CLAYEY SAND: light yellowish brown, fine to medium grained, dry, stiff. ...increase in sand, fine to coarse grained.										
10					20, 50/ 6"			105	10			
		CL: CLAY: light brown, dry, hard, trace silt.										
15					41							
		n/a.										
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-09

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		CL/SC: SANDY CLAY/ CLAYEY SAND: light brown, fine to medium grained sand, dry, trace white streaks.										
					57			106	12			
		...hard/ dense.										
		...fine sand, no white streaks.										
5					43			122	3			
		SM: SILTY SAND: light brown, fine to coarse grained, slightly moist, medium dense, trace clay, trace fine gravel, subangular.										
		...decrease in fines, dry, no fine gravel, no trace clay.										
10					39			123	2			
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, trace clay.										
		...decrease in fines, no trace clay.										
15					42							
		SM: SILTY SAND w/ CLAY: light brown, fine to coarse grained, dry, medium dense.										
		End of boring.										
20												
25												

Completion Depth:	16.5	**Drilling Equipment:**	Mobile B-61
Date Started:	10/8/19	**Drilling Method:**	Hollow Stem Auger
Date Completed:	10/8/19	**Drive Weight:**	140 pounds
California Sampler:	2.4" inner diameter	**Hole Diameter:**	8 inches
SPT Sampler:	1.4" inner diameter	**Drop:**	30 inches
		Remarks:	Borings backfilled with cuttings

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LOG OF BORING NO. B-10

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, slightly moist, subangular, trace clay.										
		...loose.			10			102	7			
5					31			112	11			
		CL: SANDY CLAY: light brown, fine to medium grained sand, slightly moist, very stiff. ...increase in sand.										
10					36							
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, subangular.										
		SC: CLAYEY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, subangular.										
15					20, 50/ 6"			103	14			
		CL: CLAY: light brown, dry, hard, trace gypsum.										
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

GEO_TARGET BORING LOGS Z GLOBAL TAFT.GPJ GEOTECHNICAL 08.GDT 11/18/19

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LOG OF BORING NO. B-11

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		CL: SANDY CLAY: light brown, fine to medium grained sand, dry, trace silt, trace gypsum.										
					27			110	5			
		...very stiff.										
		CL: CLAY: white, dry, very stiff, trace gypsum.										
5					34, 50/ 5"			113	11			
		CL: CLAY: light brown, dry, hard, trace fine to medium grained sand.										
		SC: CLAYEY SAND: light brown, fine to coarse grained, dry, very dense, subangular, trace gypsum, slightly cemented.										
10					77			111	7			
		CL: CLAY w/ SAND: light brown, fine to medium grained sand, dry, hard.										
15					46			102	6			
		ML: SILT w/ CLAY: light brown, dry, hard, clay chunks.										
		End of boring.										
20												
25												

Completion Depth:	16.5	**Drilling Equipment:**	Mobile B-61
Date Started:	10/8/19	**Drilling Method:**	Hollow Stem Auger
Date Completed:	10/8/19	**Drive Weight:**	140 pounds
California Sampler:	2.4" inner diameter	**Hole Diameter:**	8 inches
SPT Sampler:	1.4" inner diameter	**Drop:**	30 inches
		Remarks:	Borings backfilled with cuttings

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Bakersfield, CA 93301
Telephone: (661) 327-0671
Fax: (661) 324-4218

LOG OF BORING NO. B-12

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND: light yellowish brown, fine to medium grained, dry.					31					
		...medium dense.			37			121	2			
5		**SM: CLAYEY SILTY SAND:** light yellowish brown, fine to coarse grained, dry, medium dense, subangular.			18							
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, medium dense.										
		SP: SAND w/ SILT: light yellowish brown, fine to coarse grained, dry, medium dense, increase in coarse sand.										
10		**CL: SILTY CLAY:** light brown, dry, very stiff, trace fine to medium grained sand, trace gypsum.			32			109	8			
15		**SC: CLAYEY SAND w/ SILT:** light yellowish brown, fine to coarse grained, dry, medium dense, trace fine gravel, subangular.			29			96	14			
		CL: CLAY: light yellowish brown, dry, very stiff.										
		End of boring.										
20												
25												

Completion Depth: 16.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

GEO_TARGET BORING LOGS Z GLOBAL TAFT.GPJ GEOTECHNICAL 08.GDT 11/18/19

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LOG OF BORING NO. B-13

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND w/ CLAY: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular.										
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, subangular, trace clay.			18			111	3			
5		...medium dense, with clay. ...increase in coarse sand, with fine gravel, subangular.			25			112	2			
10		**SM: SILTY SAND w/ CLAY:** light yellowish brown, fine to coarse grained, dry, very dense, subangular, cemented.			39, 50/ 6"			117	6			
15		**SM: SILTY SAND:** light yellowish brown, fine to coarse grained, dry, medium dense, trace clay, trace fine gravel, subangular, slightly cemented, decrease in fines. ...increase in fines, moderately cemented.			42			101	3			
20		**SM: CLAYEY SILTY SAND:** light yellowish brown, fine to coarse grained, dry, very dense, subangular, slightly cemented.			20, 50/ 3"			105	5			
25												

Completion Depth: 27.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-13

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		CL: SILTY CLAY: light brown, dry, hard.			34, 50/ 4"			98	15			
		End of boring due to difficult drilling.										
30												
35												
40												
45												
50												

Completion Depth: 27.5
Date Started: 10/7/19
Date Completed: 10/7/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-14

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		Surface: dry grass, silty sand, dry, yellowish brown, trace fine gravel, subangular/ angular.										
		SM: SILTY SAND w/ CLAY: light yellowish brown, fine to coarse grained, dry, trace fine gravel, subangular.					25					
		SM: SILTY SAND: light yellowish brown, fine to coarse grained, dry, loose, trace fine gravel, subangular.			12			115	2			
5					41			123	5			
		SP: SAND w/ SILT: light yellowish brown, fine to coarse grained, dry, medium dense, with fine gravel, subangular.										
		SC: CLAYEY SAND: light yellowish brown, fine to coarse grained, dry, medium dense, subangular, trace gypsum.										
10		**SP: SAND w/ CLAY:** olive brown with white mottling, fine to coarse grained, dry, medium dense, subangular.			24			111	4			
15					22							
		CL: CLAY w/ SAND: yellowish brown, fine to coarse grained sand, dry, stiff, subangular.										
20					35			114	7			
		SC: CLAYEY SAND: olive brown, fine to coarse grained, dry, medium dense, subangular.										
25												

Completion Depth: 41.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

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LOG OF BORING NO. B-14

Project Name: **Z Global Taft Solar Site**
Project Number: **G19-213-10B**
Project Location: **Taft, California**
Logged by: **Y. Xu**
Checked by: **A. Terronez**

Surface El.:
Location:

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Sample Number	Penetration Blows / Foot	Pocket Penetrometer, TSF	% Passing No. 200 Sieve	In-Situ Dry Weight (pcf)	In-Situ Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index
		SC: CLAYEY SAND: olive brown, fine to coarse grained, dry, medium dense, subangular.*(continued)* ...loose.			12			109	5			
30		**CL: CLAY w/ SAND:** yellowish brown, fine grained sand, dry, very stiff.			30			116	4			
35		**SM: CLAYEY SILTY SAND:** yellowish brown, fine to coarse grained, dry, medium dense, trace fine gravel, subangular.			24			110	7			
40		**CL: CLAY w/ SAND:** olive brown, fine to coarse grained sand, dry, very stiff, subangular.			37			107	11			
		End of boring.										
45												
50												

Completion Depth: 41.5
Date Started: 10/8/19
Date Completed: 10/8/19
California Sampler: 2.4" inner diameter
SPT Sampler: 1.4" inner diameter

Drilling Equipment: Mobile B-61
Drilling Method: Hollow Stem Auger
Drive Weight: 140 pounds
Hole Diameter: 8 inches
Drop: 30 inches
Remarks: Borings backfilled with cuttings

GEO_TARGET BORING LOGS Z GLOBAL TAFT.GPJ GEOTECHNICAL 08.GDT 11/18/19

APPENDIX B

LABORATORY TESTING RESULTS

APPENDIX B
LABORATORY TESTING

Moisture-Density Tests

The field moisture content, as a percentage of dry weight of the soils, was determined by weighing the samples before and after oven drying in accordance with ASTM D 2216 test procedures. Dry densities, in pounds per cubic foot, were also determined for undisturbed core samples in general accordance with ASTM D 2937 test procedures. Test results are presented on the boring logs in Appendix A.

Direct Shear Test

Three (3) Direct Shear Tests were performed on relatively undisturbed soil samples obtained at the time of drilling in the area of planned construction. The tests were conducted to determine the soil strength characteristics. The standard test method is ASTM D3080, Direct Shear Test for Soil under Consolidated Drained Conditions. The direct shear test results are presented graphically on Figures B-1 through B-3.

Collapse Potential Test

Six (6) Collapse Potential Tests wer performed on relatively undisturbed soil samples to evaluate collapse potential characteristics. The tests were performed in general accordance with ASTM D 5333. The samples were initially loaded under as-received moisture content to a selected stress level, loaded up to a maximum load of 1300 psf and were then saturated. The test results are presented on Figures B-4 through B-9.

Expansion Index Test

One (1) Expansion Index Test was performed on a bulk soil sample in the Site area. The test was performed in general accordance with UBC Standard 18-2. The test result is presented on Figure B-10.

Soil Corrosivity

Two (2) Corrosivity Evaluations were performed on bulk soil samples obtained at the time of drilling in the area of planned construction. The soil samples were evaluated for minimum resistivity (ASTM G57), sulfate ion concentration (CT 417), chloride ion concentration (CT 422), and pH of soil (ASTM D4972). The test results are presented in Table B-1.

Minus #200 Wash Tests

Four (4) Minus #200 Wash Tests were performed on soil samples in the area of planned construction. The tests were performed in general accordance with Test Method ASTM C138. The test results are presented in Table B-2.

Table B-1: Summary of Corrosion Test Results				
Sample Location	**pH**	**Sulfate, ppm**	**Chloride, ppm**	**Minimum Resistivity, ohm-cm**
B-5 @ 0-5 feet bgs	7.2	Not Detected	25	1,700
B-13 @ 0-5 feet bgs	7.0	Not Detected	25	3,100

Table B-2: Summary of Minus #200 Wash Test Results	
Test Location	**Percent Fines**
B-5 @ 0-5 feet bgs	34
B-8 @ 0-5 feet bgs	43
B-12 @ 0-5 feet bgs	31
B-14 @ 0-5 feet bgs	25

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Direct Shear Test

ASTM D 3080

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/15/2019
Lab Tracking ID:	B19-226	**Report Date:**	10/31/2019
Sample Location:	B-1 @ 3.0-3.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: SILTY SAND: light yellowish brown, dry, fine to coarse grained.	**Tested By:**	C. Irving

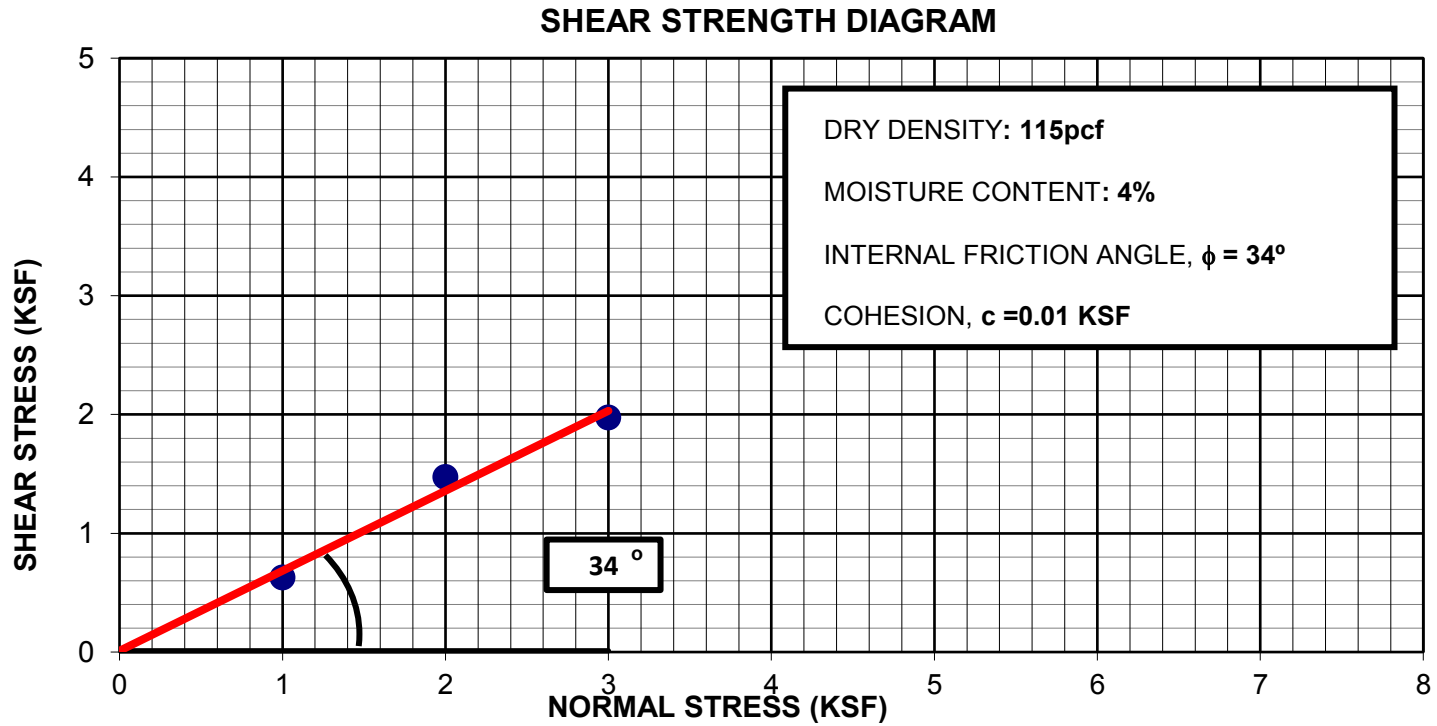

Figure B-1

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Direct Shear Test

ASTM D 3080

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/15/2019
Lab Tracking ID:	B19-226	**Report Date:**	
Sample Location:	B-6 @ 6.0-6.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: SILTY SAND: light yellowish brown, dry, fine to coarse grained.	**Tested By:**	I. Remotigue

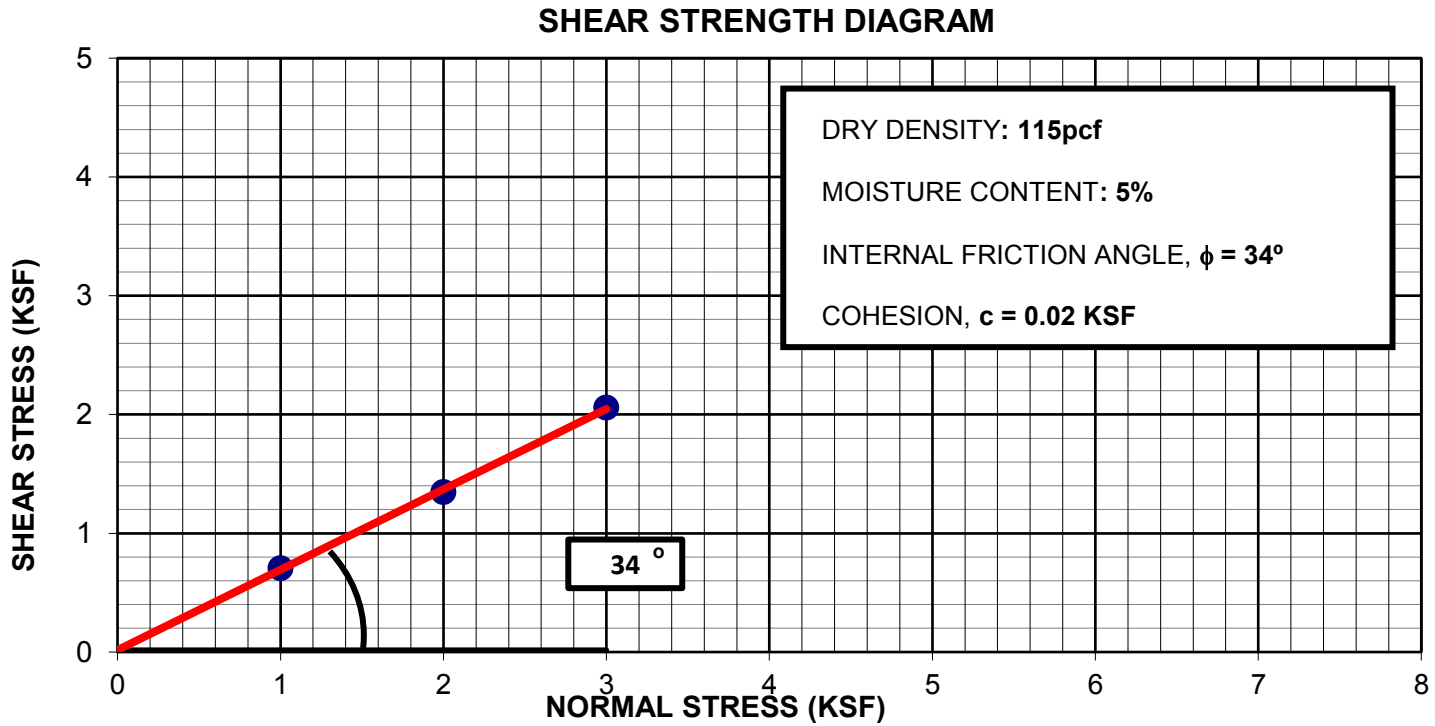

Figure B-2

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Direct Shear Test

ASTM D 3080

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/15/2019
Lab Tracking ID:	B19-226	**Report Date:**	10/31/2019
Sample Location:	B-12 @ 3.0-3.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: SILTY SAND: light yellowish brown, dry, fine to medium sand.	**Tested By:**	C. Irving

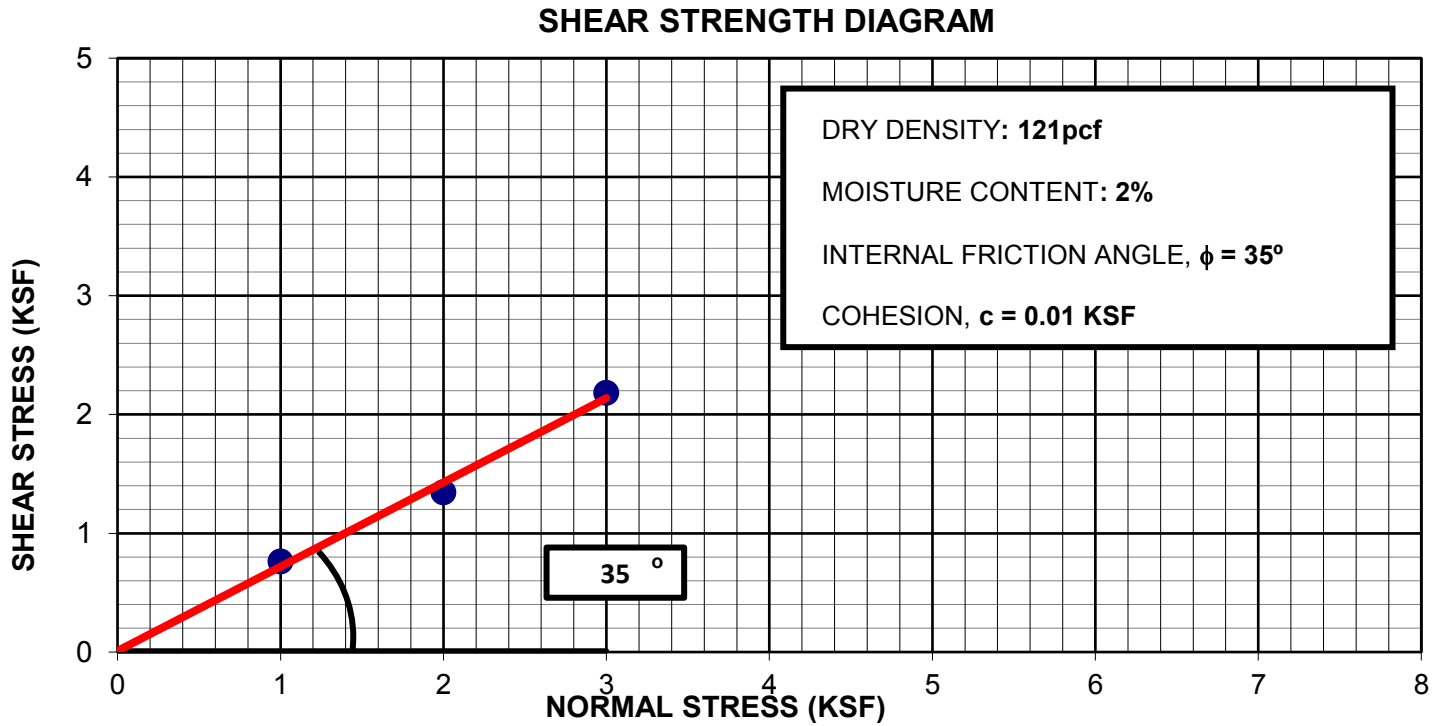

Figure B-3

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-1 @ 11-11.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: SILTY SAND: light yellowish brown, fine to coarse grained sand.	**Tested By:**	I. Remotigue

Collapse Potential:	0.29 percent collapse at 1300 psf	**Dry Density (pcf):**	112
Peak Load (psf):	1300	**Initial Moisture Content (%):**	5

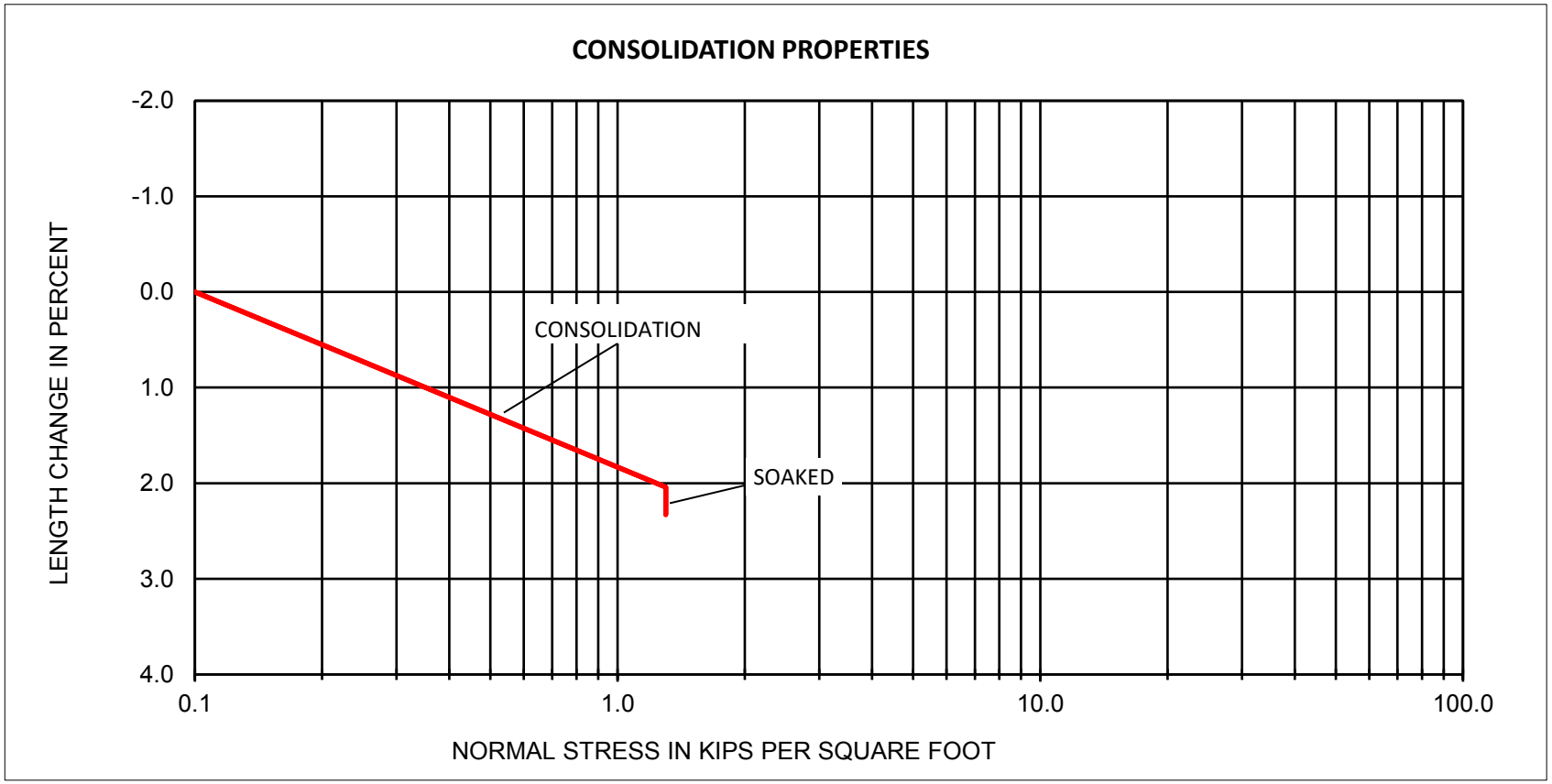

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Figure B-4

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-4 @ 11-11.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SC: CLAYEY SAND: light brown, dry, fine to medium grained sand.	**Tested By:**	I. Remotigue

Collapse Potential:	0.3 percent collapse at 1300 psf	**Dry Density (pcf):**	107
Peak Load (psf):	1300	**Initial Moisture Content (%):**	8

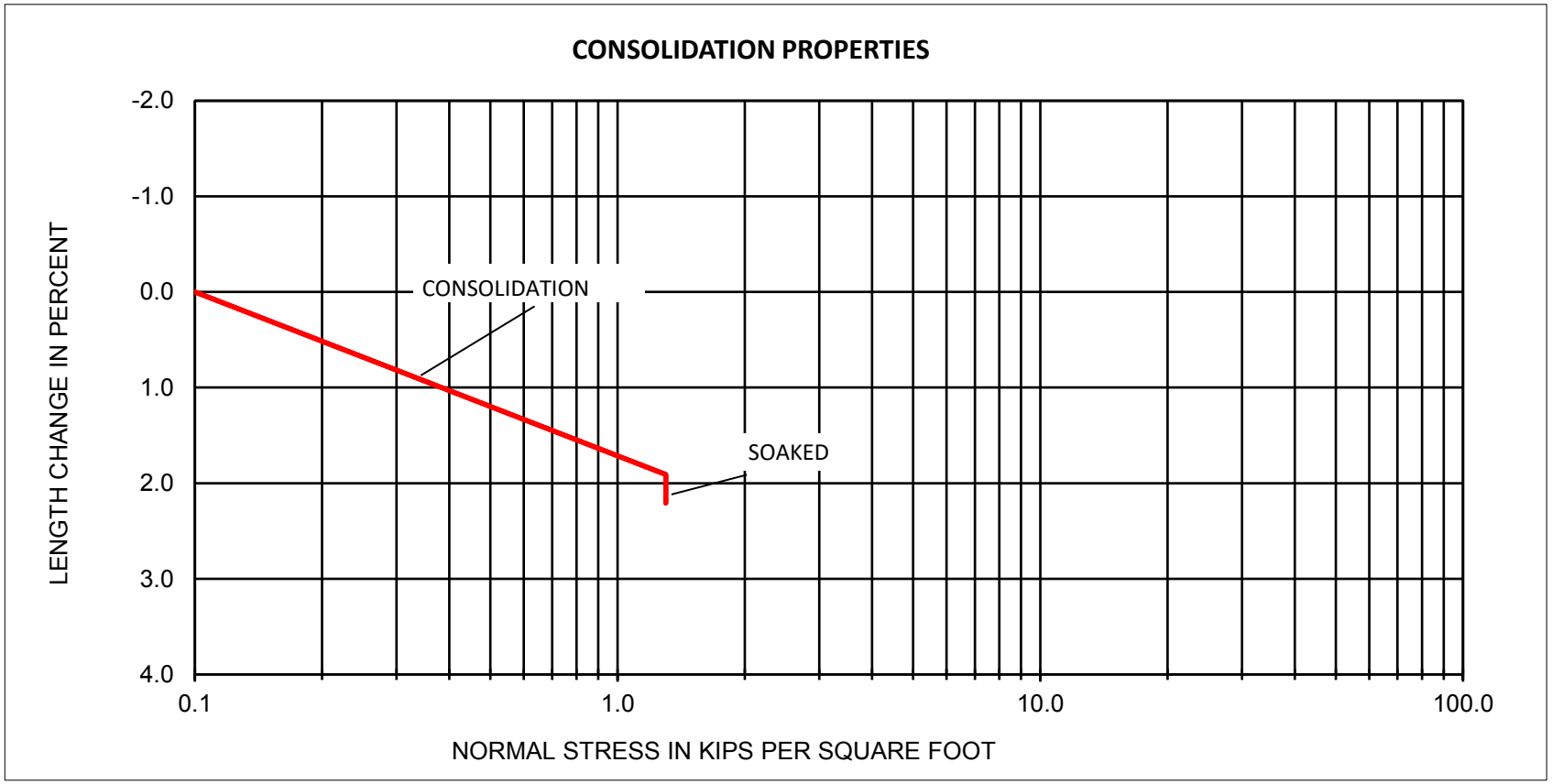

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Figure B-5

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-6 @ 11-11.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: SILTY SAND: light yellowish brown, dry, fine to coarse grained.	**Tested By:**	C. Irving

Collapse Potential:	0.31 percent collapse at 1300 psf	**Dry Density (pcf):**	110
Peak Load (psf):	1300	**Initial Moisture Content (%):**	8

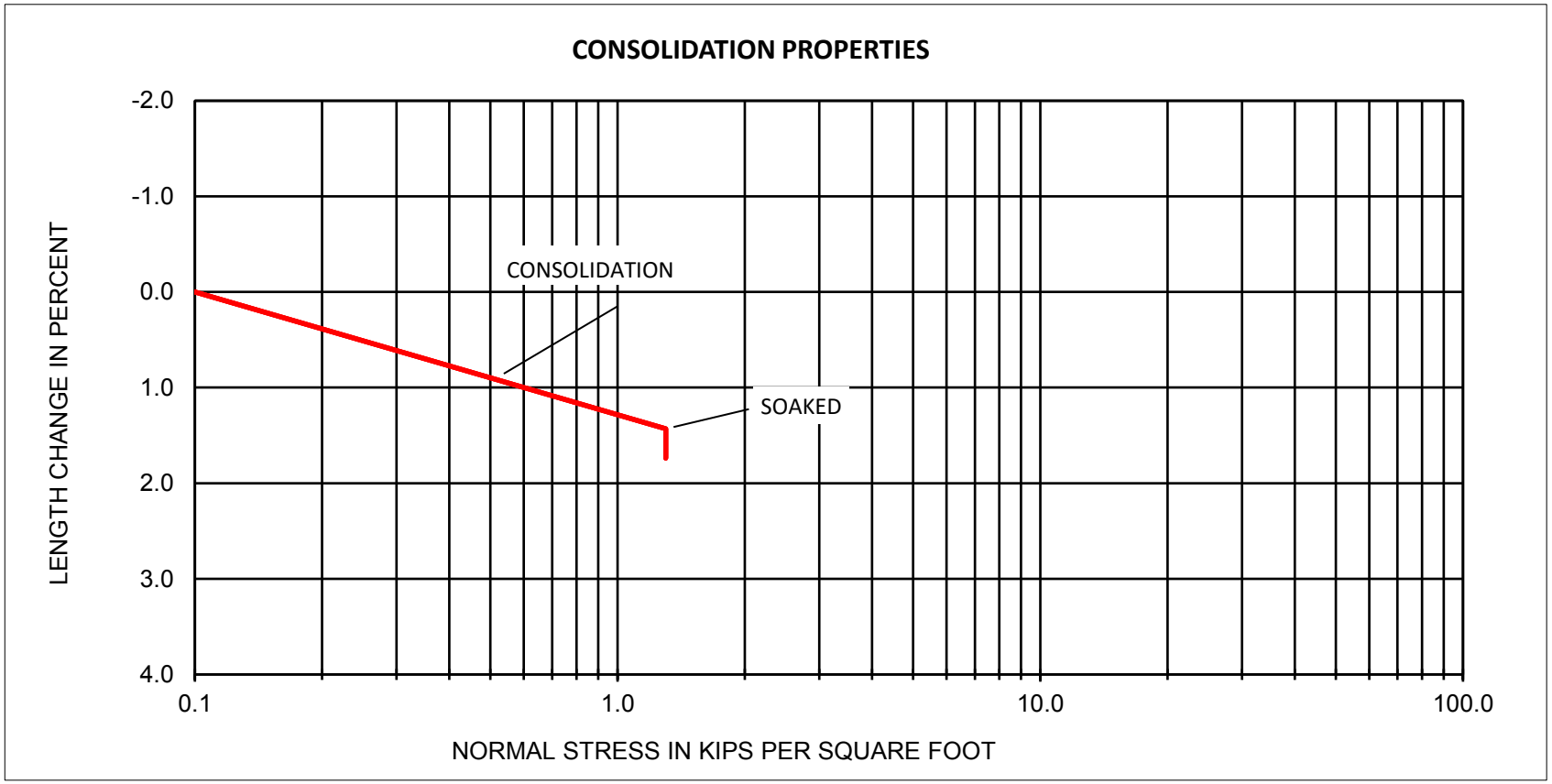

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Figure B-6

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-14 @ 11-11.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SP-SC: Poorly Graded SAND with Clay: olive brown, dry, fine to coarse grained sand.	**Tested By:**	C. Irving
Collapse Potential:	0.3 percent collapse at 1300 psf	**Dry Density (pcf):**	111
Peak Load (psf):	1300	**Initial Moisture Content (%):**	4

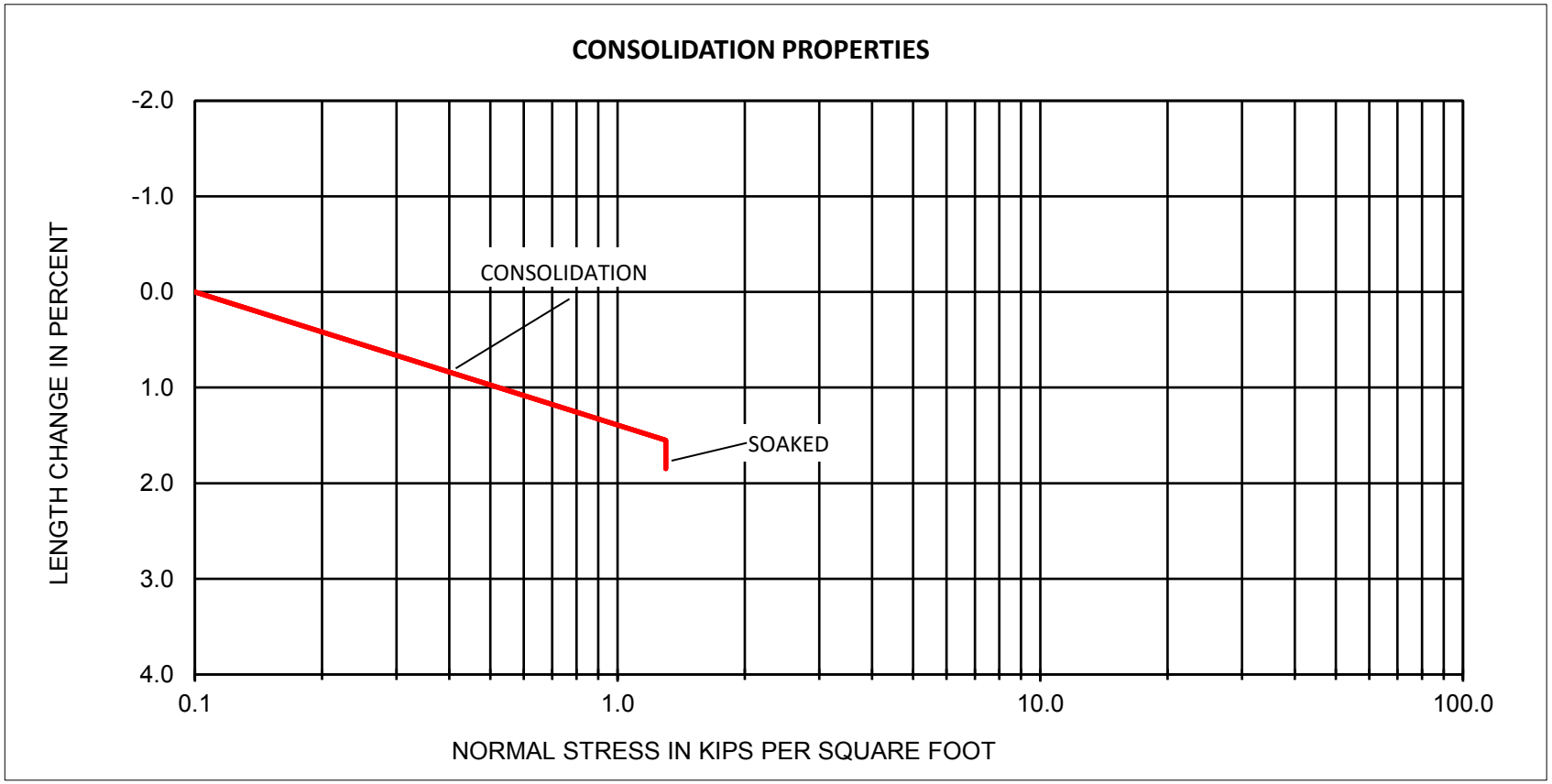

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Figure B-7

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-14 @ 26-26.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SC: CLAYEY SAND: olive brown, dry, fine to coarse grained sand.	**Tested By:**	C. Irving

Collapse Potential:	0.37 percent collapse at 1300 psf	**Dry Density (pcf):**	109
Peak Load (psf):	1300	**Initial Moisture Content (%):**	5

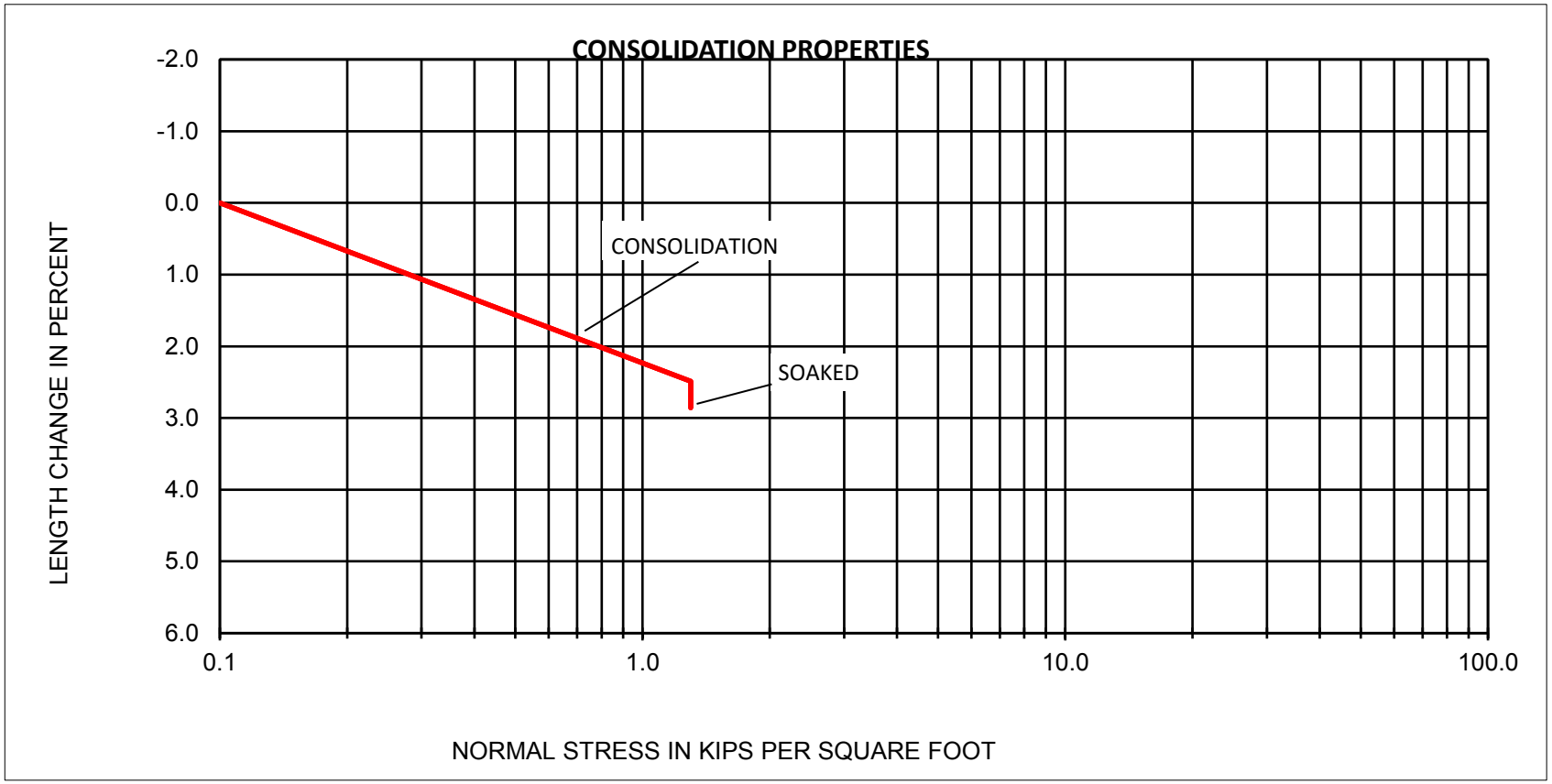

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Figure B-8

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Collapse Potential

ASTM D 2435, One-Dimensional Analysis

Project Name:	Z Global Taft Solar Site	**Sample Date:**	10/8/2019
Project Number:	G19-213-10B	**Test Date:**	10/14/2019
Sample Location:	B-14 @ 36-36.5 feet bgs	**Sampled By:**	Y. Xu
Sample Description:	SM: CLAYEY SILTY SAND: yellowish brown, dry, fine to coarse grained sand.	**Tested By:**	C. Irving
Collapse Potential:	0.31 percent collapse at 1300 psf	**Dry Density (pcf):**	110
Peak Load (psf):	1300	**Initial Moisture Content (%):**	7

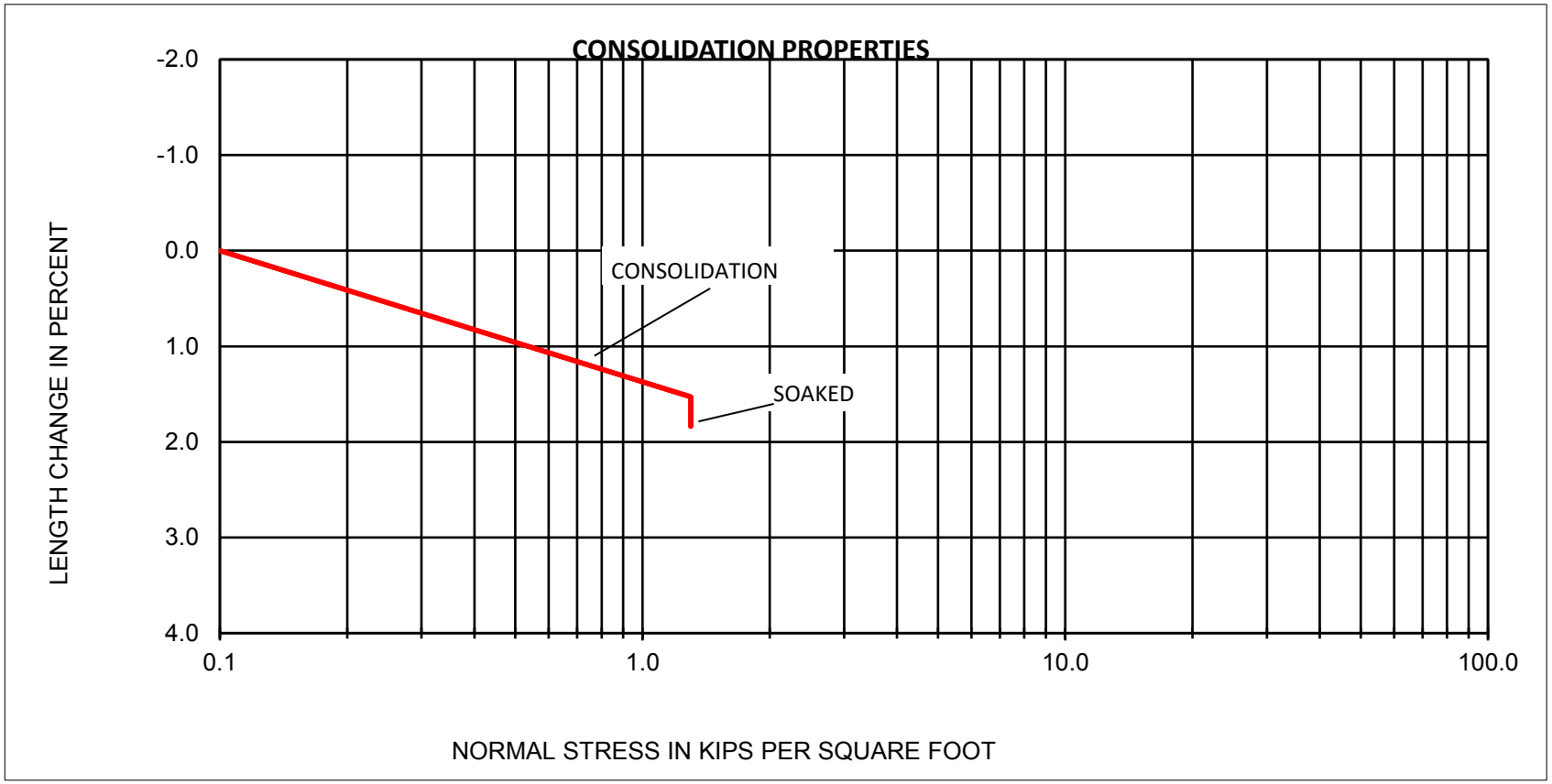

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Figure B-9

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EXPANSION INDEX OF SOILS

ASTM D 4829 / UBC STANDARD 18-2

Project Name: Z Global Taft Solar Site
Project Number: G19-213-10B
Sample Date: 10/7/2019
Lab Tracking ID: B19-226
Test Date: 10/30/2019
Sample Location: B-8 @ 0.0-5.0 feet bgs
Sample Description: SC: CLAYEY SAND: light yellowish brown, fine to coarse grained sand.
Sampled By: Y. Xu **Tested By:** I. Remotigue **Reviewed By:** I.L.T.Remotigue

TEST DATA

INITIAL SET-UP DATA		FINAL TAKE-DOWN DATA	
Sample + Tare Weight (g)	771.9	Sample + Tare Weight (g)	810.0
Tare Weight (g)	366.9	Tare Weight (g)	366.9
Moisture Content Data		**Moisture Content Data**	
Wet Weight + Tare	150.0	Wet Weight + Tare	810.0
Dry Weight + Tare	137.9	Dry Weight + Tare	744.0
Tare Weight (g)	0	Tare Weight (g)	366.9
Moisture Content (%)	8.8%	Moisture Content (%)	17.5%
Initial Volume (ft^3)	0.007272	Final Volume (ft^3)	0.007461
Remolded Wet Density (pcf)	122.8	Final Wet Density (pcf)	130.9
Remolded Dry Density (pcf)	112.9	Final Dry Density (pcf)	111.4
Degree of Saturation	**48.1**	**Degree of Saturation**	**92**

EXPANSION READINGS

Initial Gauge Reading (in)	0.2493
Final Gauge Reading (in)	0.2753
Expansion (in)	0.0260

Uncorrected Expansion Index	**26**
Corrected Expansion Index, EI	**25**

Classification of Expansive Soil

EI	Potential Expansion
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

Remarks: The material has a Low Potential Expansion

Figure B-10

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Percolation Test

Project Name: Z Global Taft Solar Site
Tested By: V. Simental
Project Number: G19-213-10B
Test Date: 10/8/2019
Test Hole No: PT-1
Depth of Test Hole: 3 feet
Time Presaturation: 24 hours
Diameter of Test Hole: 5 inches
Soil Description:

Initial Time T_1	Depth of Water d_1, (Inch)	Final Time T_2	Final Depth d_2 (inch)	Time Interval ΔT (min)	Change in Depth Δd (inch)	Percolation Rate $\Delta T/d\Delta$ (min/inch)
Test 1						
14:08:00	31.5	14:10:00	26	02:00	5.5	0.364
14:10:00	26	14:12:00	22	02:00	4	0.500
14:12:00	22	14:14:00	19	02:00	3	0.667
14:14:00	19	14:16:00	17	02:00	2	1.000
14:16:00	17	14:18:00	14.5	02:00	2.5	0.800
14:18:00	14.5	14:20:00	13	02:00	1.5	1.333
14:20:00	13	14:22:00	11	02:00	2	1.000
14:22:00	11	14:24:00	10	02:00	1	2.000
14:24:00	10	14:26:00	8.5	02:00	1.5	1.333
14:26:00	8.5	14:28:00	7.5	02:00	1	2.000
14:28:00	7.5	14:30:00	6.5	02:00	1	2.000
14:30:00	6.5	14:32:00	5.5	02:00	1	2.000
Test 2						
14:33:00	31	14:35:00	25.5	02:00	5.5	0.364
14:35:00	25.5	14:37:00	22	02:00	3.5	0.571
14:37:00	22	14:39:00	19.5	02:00	2.5	0.800
14:39:00	19.5	14:41:00	17	02:00	2.5	0.800
14:41:00	17	14:43:00	15	02:00	2	1.000
14:43:00	15	14:45:00	13.5	02:00	1.5	1.333
14:45:00	13.5	14:47:00	11.5	02:00	2	1.000
14:47:00	11.5	14:49:00	10	02:00	1.5	1.333
14:49:00	10	14:51:00	9	02:00	1	2.000
14:51:00	9	14:53:00	7.5	02:00	1.5	1.333
14:53:00	7.5	14:55:00	6.5	02:00	1	2.000
14:55:00	6.5	14:57:00	5.5	02:00	1	2.000
Test 3						
14:58:00	32	15:00:00	26	02:00	6	0.333
15:00:00	26	15:02:00	22.5	02:00	3.5	0.571
15:02:00	22.5	15:04:00	20	02:00	2.5	0.800
15:04:00	20	15:06:00	18	02:00	2	1.000
15:06:00	18	15:08:00	15.5	02:00	2.5	0.800
15:08:00	15.5	15:10:00	14.5	02:00	1	2.000
15:10:00	14.5	15:12:00	12.5	02:00	2	1.000
15:12:00	12.5	15:14:00	11	02:00	1.5	1.333
15:14:00	11	15:16:00	10	02:00	1	2.000
15:16:00	10	15:18:00	8.5	02:00	1.5	1.333
15:18:00	8.5	15:20:00	7.5	02:00	1	2.000
15:20:00	7.5	15:22:00	6.5	02:00	1	2.000
15:22:00	6.5	15:24:00	5.5	02:00	1	2.000
	Average of three final percolation rates of the slowest test:					**2.00**

Figure B-11

BSK ASSOCIATES

700 22nd Street
Bakersfield, CA 93301
Ph: (661) 327-0671
Fax: (661) 324-4218

Percolation Test

Project Name: Z Global Taft Solar Site
Tested By: V. Simental
Project Number: G19-213-10B
Test Date: 10/8/2019
Test Hole No: PT-2
Depth of Test Hole: 3 feet
Time Presaturation: 24 hours
Diameter of Test Hole: 5 inches
Soil Description:

Initial Time T_1	Depth of Water d_1, (Inch)	Final Time T_2	Final Depth d_2 (inch)	Time Interval ΔT (min)	Change in Depth Δd (inch)	Percolation Rate $\Delta T/d\Delta$ (min/inch)
Test 1						
10:35:00	31.5	10:36:00	27.5	01:00	4	0.250
10:36:00	27.5	10:37:00	23.5	01:00	4	0.250
10:37:00	23.5	10:38:00	20.5	01:00	3	0.333
10:38:00	20.5	10:39:00	18	01:00	2.5	0.400
10:39:00	18	10:40:00	16	01:00	2	0.500
10:40:00	16	10:41:00	13.5	01:00	2.5	0.400
10:41:00	13.5	10:42:00	12	01:00	1.5	0.667
10:42:00	12	10:43:00	10	01:00	2	0.500
10:43:00	10	10:44:00	8.5	01:00	1.5	0.667
10:44:00	8.5	10:45:00	7	01:00	1.5	0.667
10:45:00	7	10:46:00	5.5	01:00	1.5	0.667
Test 2						
10:55:00	31.5	10:56:00	29	01:00	2.5	0.400
10:56:00	29	10:57:00	25.5	01:00	3.5	0.286
10:57:00	25.5	10:58:00	19.5	01:00	6	0.167
10:58:00	19.5	10:59:00	17	01:00	2.5	0.400
10:59:00	17	11:00:00	15.5	01:00	1.5	0.667
11:00:00	15.5	11:01:00	13.5	01:00	2	0.500
11:01:00	13.5	11:02:00	11.5	01:00	2	0.500
11:02:00	11.5	11:03:00	10	01:00	1.5	0.667
11:03:00	10	11:04:00	8.5	01:00	1.5	0.667
11:04:00	8.5	11:05:00	7	01:00	1.5	0.667
11:05:00	7	11:06:00	5.5	01:00	1.5	0.667
Test 3						
11:10:00	32	11:11:00	28	01:00	4	0.250
11:11:00	28	11:12:00	25.5	01:00	2.5	0.400
11:12:00	25.5	11:13:00	22.5	01:00	3	0.333
11:13:00	22.5	11:14:00	19.5	01:00	3	0.333
11:14:00	19.5	11:15:00	17	01:00	2.5	0.400
11:15:00	17	11:16:00	15.5	01:00	1.5	0.667
11:16:00	15.5	11:17:00	13.5	01:00	2	0.500
11:17:00	13.5	11:18:00	11.5	01:00	2	0.500
11:18:00	11.5	11:19:00	10	01:00	1.5	0.667
11:19:00	10	11:20:00	8.5	01:00	1.5	0.667
11:20:00	8.5	11:21:00	7	01:00	1.5	0.667
11:21:00	7	11:22:00	5.5	01:00	1.5	0.667
	Average of three final percolation rates of the slowest test:					**0.67**

Figure B-12

BSK ASSOCIATES

700 22nd Street
Bakersfield, CA 93301
Ph: (661) 327-0671
Fax: (661) 324-4218

Percolation Test

Project Name: Z Global Taft Solar Site
Tested By: V. Simental
Project Number: G19-213-10B
Test Date: 10/8/2019
Test Hole No: PT-3
Depth of Test Hole: 3 feet
Time Presaturation: 24 hours
Diameter of Test Hole: 5 inches
Soil Description:

Initial Time T_1	Depth of Water d_1, (Inch)	Final Time T_2	Final Depth d_2 (inch)	Time Interval ΔT (min)	Change in Depth Δd (inch)	Percolation Rate $\Delta T/d\Delta$ (min/inch)
Test 1						
8:25:00	31	8:26:00	24	01:00	7	0.143
8:26:00	24	8:27:00	18	01:00	6	0.167
8:27:00	18	8:28:00	13.5	01:00	4.5	0.222
8:28:00	13.5	8:29:00	10.5	01:00	3	0.333
8:29:00	10.5	8:30:00	8	01:00	2.5	0.400
8:30:00	8	8:31:00	6.5	01:00	1.5	0.667
8:31:00	6.5	8:32:00	5	01:00	1.5	0.667
Test 2						
8:42:00	31	8:43:00	24	01:00	7	0.143
8:43:00	24	8:44:00	19	01:00	5	0.200
8:44:00	19	8:45:00	14.5	01:00	4.5	0.222
8:45:00	14.5	8:46:00	11.5	01:00	3	0.333
8:46:00	11.5	8:47:00	9	01:00	2.5	0.400
8:47:00	9	8:48:00	7.5	01:00	1.5	0.667
8:48:00	7.5	8:49:00	5.5	01:00	2	0.500
Test 3						
9:11:00	30	9:12:00	23	01:00	7	0.143
9:12:00	23	9:13:00	17.5	01:00	5.5	0.182
9:13:00	17.5	9:14:00	13.5	01:00	4	0.250
9:14:00	13.5	9:15:00	10.5	01:00	3	0.333
9:15:00	10.5	9:16:00	8	01:00	2.5	0.400
9:16:00	8	9:17:00	7	01:00	1	1.000
9:17:00	7	9:18:00	5.5	01:00	1.5	0.667
	Average of three final percolation rates of the slowest test:					**0.69**

Figure B-13

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GAS COMPANY ROAD
TAFT, KERN COUNTY, CALIFORNIA

PHASE I ENVIRONMENTAL SITE ASSESSMENT

SUBMITTED TO
Ms. Jamie Nagel
Associate Project Manager
ZGlobal
604 Sutter Street, Suite 250
Folsom, California

PREPARED BY
ENGEO Incorporated

November 19, 2019

PROJECT NO.
16654.000.000

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ENGEO
Expect Excellence

Project No.
16654.000.000

November 19, 2019

Ms. Jamie Nagel
Associate Project Manager
ZGlobal
604 Sutter Street, Suite 250
Folsom, CA 95630

Subject: Gas Company Road
Taft, Kern County, California

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Dear Ms. Nagel:

ENGEO is pleased to present our phase I environmental site assessment of the subject property (Property), located in Kern County, California. The attached report includes a description of the site assessment activities, along with ENGEO's findings, opinions, and conclusions regarding the Property.

ENGEO has the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the Property, and has developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312 and the American Standard Testing Method (ASTM) Practice E1527-13. We declare that, to the best of our professional knowledge and belief, the responsible charge for this study meets the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312 and ASTM E1527-13.

We are pleased to be of service to you on this project. If you have any questions concerning the contents of our report, please contact us.

Sincerely,

ENGEO Incorporated

Katherina Zecca, EIT
kz/sm/jf

Shawn Munger, CHG

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EXECUTIVE SUMMARY

ENGEO conducted a phase I environmental site assessment for the property located at Gas Company Road in Kern County, California (Property). The Property is approximately 58.25 acres in area and is identified by Assessor's Parcel Numbers (APN) 220-240-26 and 220-300-14.

The Property consists of vacant land with desert shrubs and various disturbed roads. Review of historical records indicates that the Property had been occupied by several oil corporations as part of the larger Buena Vista Oil Field as early as 1917. Records from the Department of Oil, Gas, and Geothermal Resources indicate nine oil and gas wells were plugged and abandoned between 1926 and 1979.

This assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, and physical setting sources. A reconnaissance of the Property was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use.

The site reconnaissance and records review did not find documentation or physical evidence of soil, soil gas, or groundwater impairments associated with the use or past use of the Property. A review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the Property and did not identify contaminated facilities within the appropriate American Society for Testing and Materials (ASTM) search distances that would reasonably be expected to impact the Property.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs), no historical RECs, and no controlled RECs were identified for the Property.

Based on the review of regulatory databases and site reconnaissance, we present information on features of potential environmental concern that were either contained in the databases or observed on the Property. These features were not considered to be RECs. We briefly discuss each feature below.

- The Property was formerly part of the Buena Vista Oil Field and contains nine oil and gas wells that have since been plugged and abandoned under DOGGR standards.

ENGEO has performed a phase I environmental site assessment in general conformance with the scope and limitations of ASTM E1527-13 and the standards and practices of the All Appropriate Inquiry – Final Rule (40 Code of Federal Regulations Part 312). Any exceptions to, or deletions from, this practice are described in Section 5.2 of this report.

It is conceivable that unknown remnants of the Buena Vista Oil Field production may exist beneath the Property. If grading or foundation elements are planned, an environmental professional should be retained to address potential adverse subsurface conditions associated with Buena Vista Oil Field.

As a safety precaution, ENGEO recommends to fill or cover remnant cellars on the Property. ENGEO recommends no further environmental studies at this time and concludes the Property is suitable for photovoltaic solar panel installation..

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1.0 INTRODUCTION

1.1 SITE LOCATION AND DESCRIPTION

ENGEO conducted a phase I environmental site assessment for the Property located at Gas Company Road in Kern County, California (Figures 1 and 2). The approximately 58.25-acre Property is identified as APNs 220-240-26 and 220-300-14 (Figure 3) and is currently undeveloped land historically part of the Buena Vista Oil Field.

1.2 CURRENT USE OF PROPERTY AND ADJOINING PROPERTIES

The Property is currently undeveloped land with desert shrubs and various unpaved dirt roads. The Property contains nine abandoned and plugged oil wells and abandoned oil infrastructure as part of the Buena Vista Oil Field, the former Naval Petroleum Reserve. The most northwest area of the Property contains a Southern California Gas pipeline.

The area surrounding the property consists of an animal shelter in the southwest, a wastewater treatment plant in the south, solar panel field along the southcentral border, and a vacuum services equipment yard in the southeast. North and east of the Property remains undeveloped land with active and abandoned oil wells, as part of the Buena Vista Oil Field.

1.3 SITE AND VICINITY CHARACTERISTICS

According to published topographic maps, the Property ranges in elevation from approximately 750 feet above mean sea level (msl) in the southeastern direction to approximately 810 feet above msl to the northeastern direction. Review of the Geologic Map (King and Beikman 1994) found that the Property is underlain by Cenozoic-aged kimberlina fine sandy loam.

Geocheck – Physical Setting Source Summary of the Environmental Resources Data report (Appendix A) indicated no Federal United States Geological Survey (USGS) wells located within 1 mile of the Property.

We reviewed the Department of Water Resources On-line Water Data Library for depth to water in the vicinity of the Property. The website identified two wells within 1 mile of the Property. One well is located 1 mile northwest of the Property and reports one groundwater level of 239 feet below ground surface (bgs) in 2015. The second well is 0.75 mile southeast of the Property and reports a depth to water level of 89.5 feet bgs.

The site-specific depth to groundwater and direction of groundwater flow was not determined as part of this assessment. Fluctuations in groundwater levels may occur seasonally and over a period of years due to variations in precipitation, temperature, irrigation and other factors.

We reviewed the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website and map database to determine if any historic oil and/or gas wells were located within the Property. Nine oil and and gas wells were mapped within the Property and 297 oil and gas wells were mapped 1 mile of the Property as part of the Buena Vista Oil Field. Each well within the Property has been plugged and abandoned between 1926 and 1979.

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1.4 PURPOSE OF PHASE I ENVIRONMENTAL SITE ASSESSMENT

This assessment was performed at the request of ZGlobal. The objective of this phase I environmental site assessment is to identify Recognized Environmental Conditions (RECs) associated with the Property. As defined in the ASTM Standard Practice E1527-13, an REC is "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

1.5 DETAILED SCOPE OF SERVICES

The scope of services performed included the following:

- A review of publicly available and practically reviewable standard local, state, tribal, and federal environmental record sources.
- A review of publicly available and practically reviewable standard historical sources, aerial photographs, fire insurance maps and physical setting sources.
- A reconnaissance of the Property to review site use and current conditions. The reconnaissance was conducted to check for the storage, use, production or disposal of hazardous or potentially hazardous materials.
- Interviews with owners/occupants and public sector officials.
- Preparation of this report with our findings, opinions, and conclusions.

1.6 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

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The professional staff at ENGEO strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. The recommendations and conclusions presented in this report were based on the findings of our study, which were developed solely from the contracted services. The findings of the report are based in part on contracted database research, out-of-house reports, and personal communications. The opinions formed by ENGEO are based on the assumed accuracy of the relied upon data in conjunction with our relevant professional experience related to such data interpretation. ENGEO assumes no liability for the validity of the materials relied upon in the preparation of this report.

This document must not be subject to unauthorized reuse; that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. The findings from a phase I environmental site assessment are valid for one year after completion of the report. Updates of portions of the assessment may be necessary after a period of 180 days after completion.

This phase I environmental site assessment is not intended to represent a complete soil, soil gas, or groundwater characterization, nor define the depth or extent of soil, soil gas, or groundwater contamination. It is intended to provide an evaluation of potential environmental concerns associated with the use of the Property. A more extensive assessment that would include a

subsurface exploration with laboratory testing of soil, soil gas, and groundwater samples could provide more definitive information concerning site-specific conditions. If additional assessment activities are considered for the Property and if other entities are retained to provide such services, ENGEO cannot be held responsible for any and all claims arising from or resulting from the performance of such services by other persons or entities. ENGEO can also not be held responsible from any and all claims arising or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

1.7 SPECIAL TERMS AND CONDITIONS

ENGEO has prepared this report for the exclusive use of our client, ZGlobal. It is recognized and agreed that ENGEO has assumed responsibility only for undertaking the study for the client. The responsibility for disclosures or reports to a third party and for remedial or mitigative action shall be solely that of the Client.

Laboratory testing of soil or groundwater samples was not within the scope of the contracted services. The assessment did not include an asbestos survey, an evaluation of lead-based paint, an inspection of light ballasts for polychlorinated biphenyls (PCBs), a radon evaluation, or a mold survey.

This report is based upon field and other conditions discovered at the time of preparation of ENGEO's assessment. Visual observations referenced in this report are intended only to represent conditions at the time of the reconnaissance. ENGEO would not be aware of site contamination, such as dumping and/or accidental spillage, that occurred subsequent to the reconnaissance conducted by ENGEO personnel.

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2.0 RECORDS REVIEW

2.1 PROPERTY RECORDS

2.1.1 Title Report/Ownership

The Title Report lists recorded land title detail, ownership fees, leases, land contracts, easements, liens, deficiencies, and other encumbrances attached to or recorded against a subject property. Laws and regulations pertaining to land trusts vary from state to state and the detail of information presented in a Title Report can vary greatly by jurisdiction. As a result, ENGEO utilizes a Title Report, when provided to us, as a supplement to other historical record sources.

A Preliminary Title Report for the Property, prepared by National Fidelity Title Company and dated July 20, 2018, was provided for our review. The Property title is vested in Westside Economic Development Co., LLC, A California Limited Liability Company. No references to environmental liens, deed restrictions or other potential environmental issues were noted. This report is included in Appendix E.

2.2 HISTORICAL RECORD SOURCES

The purpose of the historical record review is to develop a history of the previous uses or occupancies of the Property and surrounding area in order to identify those uses or occupancies that are likely to have led to recognized environmental conditions on the Property.

2.2.1 Historical Topographic Maps

Historical USGS topographic maps were reviewed to determine if discernible changes in topography or improvements pertaining to the Property had been recorded. The following maps were provided to us through an EDR Historical Topographic Map Report, presented in Appendix C.

TABLE 2.2.1-1: Historical Topographic Maps

QUAD	YEAR	DESCRIPTION
Buena Vista Lake	1910-1912	Property: The Property appears as vacant land, with no structures shown. Adjoining: The surrounding area is shown as vacant land. Two structures appear in the southeast corner of the map. The Sunset Railroad is located on the southwestern area of the map.
Buena Vista Hills / Taft	1944-1947	Property: The Property appears to have a road parallel to the northern Property border. The Property appears to have six oil/gas wells in the southern parcel. Adjoining: The surrounding area consists of undeveloped land with a dense number of oil/gas wells and oil tanks in the north and eastern areas of the map (labeled as Buena Vista Hills). Various roads appear adjacent to the Property. Structures are located on the northeastern border of the Property. Various structures and smaller roads appear along the western border of the map. The Naval Petroleum Reserve boundary appears south of the Property.
Taft	1950-1973	Property: The Property appears relatively unchanged from the previous maps. Adjoining: The Taft Airport appears southwest of the Property. Southern California Gas Camp appears labeled for the structures located along the southeastern border of the Property. Standard Oil Company appears northeast of the Property, with a few structures and roads.
Taft	2012	Property: The map no longer appears to show structures or wells. No oil or gas wells appear within the Property. Adjoining: The map appears relatively unchanged from previous maps, with the exception of structures and wells no longer being shown.

2.2.2 Aerial Photographs

The following aerial photographs, provided by EDR, were reviewed for information regarding past conditions and land use at the Property and in the immediate vicinity. These photographs are presented in Appendix E.

TABLE 2.2.2-1: Aerial Photographs

YEAR	DESCRIPTION
1956-1973	Property: The Property appears to be vacant land with four ground disturbances located along a road trending in the west-east direction. Two more land disturbances appears on the southeastern area of the Property. These disturbances appear to be oil well locations. One unpaved road extends from the southeast corner of the Property to the northern end of the Property. Adjoining: The surrounding area appears to be similar to the Property, with many oil well locations or land disturbances in the north and east. A few large structures appear in the northeastern area of the map. The area southwest of the Property appears to include a creek, a few structures, and agricultural land. Various structures are located along the southeast corner of the Property.
1976-2016	Property: The Property appears relatively unchanged from previous maps, with the exception of additional unpaved roads leading to potential oil wells, shown in the southeast area of the Property. Adjoining: There appears to be fewer structures in the northeastern area of the map. Large ponds of water, potentially a water treatment plant, appear along the southern border of the Property. The central west area of the map appears to show some disturbed land. The southern area of the Property shows additional structures over time. The remaining area appears relatively unchanged from previous maps.

2.2.3 Fire Insurance Maps

EDR prepared a Sanborn Fire insurance map search for the Property and surrounding properties. EDR reported that no maps were available for the Property and surrounding properties.

2.2.4 City Directory

City Directories, published since the 18th century for major towns and cities, list the name of the resident or business associated with each address. A city directory search conducted by EDR is located in Appendix F.

TABLE 2.2.4-1: City Directory

YEAR	LISTINGS
2014	Kern County Mosquito Abatement Southern California Gas Company
2010	Kern County Mosquito Abatement Thomas Energy Research
2007	Mosquito Abatement pest control
2002	Mosquito Abatement pest control Southern California Gas Company
1995	County of Kern
1992	Valley Transmission HDQTR
1987	I T Corporation
1982	I T Corporation IT Transportation Corporation
1977	Industrial Trucking Incorporated

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2.3 ENVIRONMENTAL RECORD SOURCES

EDR performed a search of federal, tribal, state, and local databases regarding the Property and nearby properties. Details regarding the databases searched by EDR are provided in Appendix A. A list of the facilities documented by EDR within the approximate minimum search distance of the Property is provided below.

2.3.1 Standard Environmental Records

2.3.1.1 Subject Property

The Property is not listed on the Standard Environmental Record source databases.

2.3.1.2 Other Properties

The following databases include facilities listed within the appropriate ASTM search distances of the Property on Standard Environmental Records sources.

TABLE 2.3.1.2-1

FACILITY	STREET	DATABASES
City Of Taft-Corporation Yard	Airport Road & Ash Street	UST
Huddleston Crane Service	810 Black Gold Ct	AST
Herc Rentals Incorporated	800 Blackgold Ct	AST
West Side Cemetery District	26910 Cedar Street	UST
Kings Oil Tools, Taft Yard	803 Blackgold Ct	AST
Burn Dump	Ash Street	SWF/LF
Section 8 Central Swds	1.7 Mi E-Ne/O Ford City	SWF/LF
Chevron #2 Burn Dump	T32s, R24e, Sect 17,N/O Gardner Field Road	SWF/LF
Laidlaw Environmental Services	7004 Gas Company Road	ENVIROSTOR
G S X Services Of California Incorporated	7004 Gas Company Road	SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-SQG

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2.3.2 Additional Environmental Records

2.3.2.1 Subject Property

The following database includes facilities listed within the appropriate ASTM search distances of the Property on the Additional Environmental Record sources.

TABLE 2.3.2.1-1

FACILITY	STREET	DATABASE
Naval Petroleum Reserve Number Two	N/A	DOD

2.3.2.2 Other Properties

The following databases include facilities listed within the appropriate ASTM search distances of the Property on the Additional Environmental Record sources.

TABLE 2.3.2.2-1

FACILITY	STREET	DATABASES
City Yard	Ash & Airport Road	HIST UST
Corporation Yard	Ash & Airport Road	SWEEPS UST
Huddleston Crane Service	810 Black Gold Ct	CERS HAZ WASTE, CERS TANKS, RCRA NONGen
Herc Rentals Incorporated	800 Blackgold Ct	CERS HAZ WASTE, CERS TANKS, RCRA NONGen
Taft Yard	800 Blackgold Ct	CERS HAZ WASTE
Westside Cemetery District	26901 Cedar Street	SWEEPS UST
Kings Oil Tools, Taft Yard	803 Blackgold Ct	CERS HAZ WASTE, CERS TANKS, RCRA NONGen
Laidlaw Environmental Services	7004 Gas Company Road	EMI, HIST UST
G S X Services Of California Incorporated	7004 Gas Company Road	FINDS, ECHO

Based on the distances to the identified database sites, regional topographic gradient, and the EDR findings, it is unlikely that the above-stated database sites pose an environmental risk to the Property. Properties that are on the "Orphan Summary" list appear below.

TABLE 2.3.2.2-2

FACILITY	STREET	DATABASES
Southern California Gas Company	East of Airport Road	FINDS
Texaco- Buena Vista Hills Gas	¼ mile southwest of Airport	TSCA

2.4 REGULATORY AGENCY FILES AND RECORDS

The following agencies were contacted pertaining to possible past development and/or activity at the Property.

TABLE 2.4-1: Regulatory Agency Records

NAME OF AGENCY	RECORDS REVIEWED
Kern County Department of Public Works	The Kern County Department of Public Works stated the Property is within the Taft City limits and to contact the city of Taft for records.
Kern County Department of Environmental Health Division	The Kern County Department of Environmental Health found no records associated with the Property APNs.
Kern County Fire Department	The Kern County Fire Department did not respond to inquiries at the time this report was published.
City of Taft Planning and Development and Public Works Department	Both the City of Taft Planning and Development and Public Works Department referred record requests to the City of Taft Clerk.
City of Taft City Clerk	The City of Taft Clerk provided records for the tentative parcel map 11759. These records included City Council Staff Reports, Planning Commission Staff Reports and resolutions for a project from Westside Economic Development Company, LLC.
California State Water Resources Control Board	California State Water Resources Control Board did not have records associated to the Property address.

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NAME OF AGENCY	RECORDS REVIEWED
Department of Toxic Substances Control	California Resources Production Corporation - Buena Vista Hills EPA ID (Cal000408540) showed 0.66 ton of "off-spec, aged, or surplus organics" waste, 0.33 ton of unknown waste, and 0.33 ton of ignitable waste from 2015 to 2019. California Resources Elk Hills LLC (EPA ID CA4170024414) showed from 41 to 1,921 tons of polychlorinated biphenyls, asbestos- containing waste, inorganic solid waste, waste oil, tank bottom, organic solids, paint sludge, contaminated soil, and other waste generated every year between 1993 and 2019.
California Department of Conservation, Division of Oil, Gas and Geothermal Resources	Numerous well files are publicly available for review at the DOGGR website. We reviewed well transfer and well abandonment reports for the nine oil and gas wells within the Property.

3.0 SITE RECONNAISSANCE

3.1 METHODOLOGY

ENGEO conducted a reconnaissance of the Property on October 18, 2019. The reconnaissance was performed by Katherina Zecca, a Staff Environmental Engineer of ENGEO. The Property was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The Property was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. Photographs taken during the site reconnaissance are presented in Figure 4.

3.2 GENERAL SITE SETTING

The Property is currently undeveloped land covered with desert weeds, shrubs and various unpaved dirt roads. The Property contains nine abandoned and plugged oil wells and abandoned oil infrastructure as part of the Buena Vista Oil Field, four of which were observed as a pipe or cellar during the site reconnaissance. The remaining five former oil wells were not observed. A Southern California Gas pipeline exists in the northwestern area of the Property. The most southern area of the site contains large abandoned oil field infrastructure, including a cyclone separator, gauges and miscellaneous pipes with valves. Miscellaneous pipelines, caps, and valves were also observed throughout the Property.

The area surrounding the Property consists of large ponds along the most southwestern border, solar panels along the south-central border and undeveloped land with active and abandoned oil wells in the north and west.

3.3 SITE OBSERVATIONS

The following table summarizes our observations during the reconnaissance.

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TABLE 3.3-1: Site Observations

FEATURE TYPE	OBSERVATIONS
Structures	Structures associated with the abandoned oil wells were noted onsite, such as a cyclone separator, vertical and ground pipes, and cellars. Gas pipeline markers were also noted along the east and west borders of the Property.
Hazardous Substances and Petroleum Products/Containers	No hazardous substances or petroleum products were observed at the time of the reconnaissance.
Storage Tanks (underground and above-ground)	No storage tanks were located on the Property.
Odors	No odors indicative of hazardous materials or petroleum material impacts were noted at the time of the reconnaissance.
Pools of Potentially Hazardous Liquid	No pools of potentially hazardous liquid were observed within the Property at the time of our reconnaissance.
Drums	No drums were observed at the time of the reconnaissance.
Polychlorinated Biphenyls (PCBs)	No transformers or other potential PCB-containing equipment was observed at the time of the reconnaissance.
Pits, Ponds, and Lagoons	No pits, ponds, or lagoons were observed at the time of the reconnaissance.
Stained Soil/Pavement	No stained soil was observed on the Property.
Stressed Vegetation	Stressed vegetation was observed at the time of the reconnaissance in areas where former oil well infrastructure existed.
Solid Waste/Debris	Abandoned oil well infrastructure debris, such as rusty pipes and valves were observed throughout the Property during the site reconnaissance. Various abandoned above-ground pipes that stretch across the northwestern area of the Property to the southeast were observed.
Stockpiles/Fill Material	No stockpiles or fill material was observed at the time of the reconnaissance.
Wastewater	No wastewater discharge or sources were observed during the site reconnaissance.
Wells	Four plugged and abandoned oil wells were observed as a pipe or cellar during the site reconnaissance. The remaining five former oil wells were not observed.
Septic Systems	No evidence of septic tanks were observed at the time of the reconnaissance.

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3.4 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

An asbestos and lead-based paint survey was not conducted as part of this assessment. No structures are currently located on the Property. It is possible asbestos-containing materials were associated with the former oil field operations.

3.5 INDOOR AIR QUALITY

An evaluation of indoor air quality, mold, or radon was not included as part of the contracted scope of services. The California Department of Health Services has conducted studies of radon risks throughout the state, sorted by zip code. Results of the studies indicate that 12 tests were

conducted within the Property zip code, with 1 test exceeding the current EPA action level of 4 picocuries per liter {pCi/L}[1]).

In accordance with ASTM E2600-15 (Tier 1) (*Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*), there are no potential petroleum hydrocarbon sources for vapor intrusion within 1/10 mile of the Property or volatile organic compound (VOCs) sources within 1/3 mile of the Property. As the subject site has been used for oil production, methane gas may exist beneath the subject site.

4.0 INTERVIEWS

The environmental site assessment questionnaire, pertaining to applicable past and present uses and physical characteristics of the Property and surrounding properties, was not provided by the publication of this report.

5.0 EVALUATION

5.1 OPINIONS AND DATA GAPS

It is our opinion that the findings of this study are based on a sufficient level of information obtained during our contracted scope of services to render a conclusion as to whether additional appropriate investigation is required to identify the presence or likely presence of a REC.

The following data gaps were identified during the preparation of this document.

- The Kern County Fire Department did not respond to our inquiry for public records on the Property before publication of this report.
- The environmental questionnaires were not received before the publication of this report.

5.2 FINDINGS AND CONCLUSIONS

The study included a review of local, state and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources; a reconnaissance of the Property to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials; and interview with persons knowledgeable about current and past site use.

The site reconnaissance and records review did not find documentation or physical evidence of soil, soil gas, or groundwater impairments associated with the use of the Property. A review of regulatory databases maintained by county, state, and federal agencies found no documentation of hazardous materials violations or discharge on the Property. A review of regulatory agency records and available databases did not identify contaminated facilities within the appropriate ASTM search distances that would be expected to impact the Property.

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[1] California Department of Public Health – Radon Program– (https://www.cdph.ca.gov/Programs/CEH/DRSEM/CDPH%20Document%20Library/EMB/Radon/Radon%20Test%20Results.pdf).

Based on the review of regulatory databases and site reconnaissance, we present information on features of potential environmental concern that were either contained in the databases or observed on the Property. These features were not considered to be RECs. We briefly discuss each feature below:

- The Property was formerly part of the Buena Vista Oil Field and contains nine oil and gas wells that have since been plugged and abandoned under DOGGR standards of that time.

ENGEO has performed a phase I environmental site assessment in general conformance with the scope and limitations of ASTM E1527-13 and the standards and practices of the All Appropriate Inquiry – Final Rule (40 Code of Federal Regulations Part 312). Any exceptions to, or deletions from, this practice are described in Section 5.2 of this report.

It is conceivable that unknown remnants of the Buena Vista Oil Field production may exist beneath the Property. If grading or foundation elements are planned, an environmental professional should be retained to address potential adverse subsurface conditions associated with Buena Vista Oil Field.

As a safety precaution, ENGEO recommends to fill or cover remnant cellars on the Property. ENGEO recommends no further environmental studies at this time and concludes the Property is suitable for photovoltaic solar panel installation.

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SELECTED REFERENCES

California Department of Water Resources (http://www.water.ca.gov/waterdatalibrary/)

California Department of Conservation (DOGGR)
(http://maps.conservation.ca.gov/doms/domsapp.html)

California Department of Public Health – Radon Program–
(https://www.cdph.ca.gov/Programs/CEH/DRSEM/CDPH%20Document%20Library/EMB/Radon/Radon%20Test%20Results.pdf).

Google Maps (http://maps.google.com)

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).

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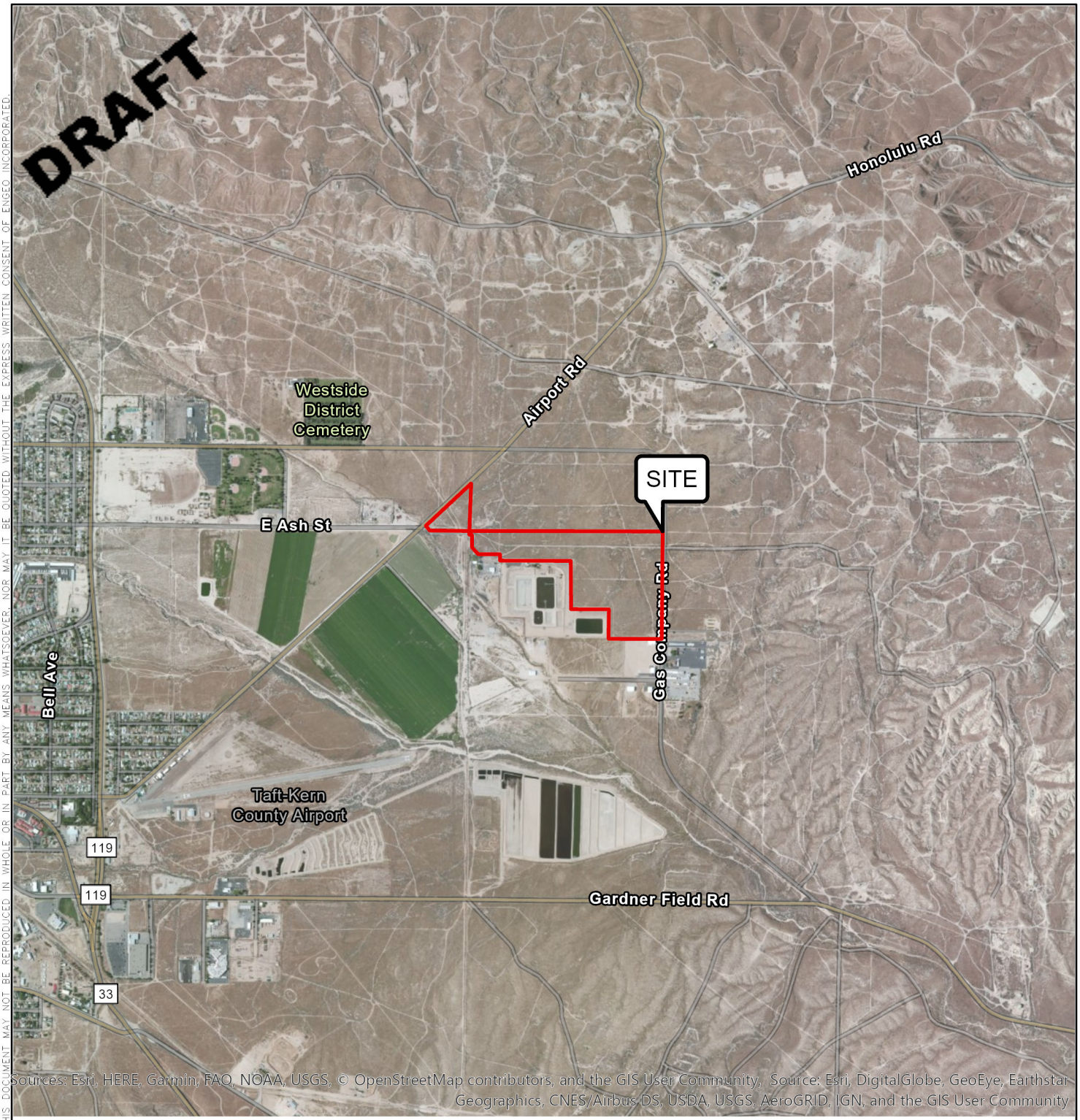
FIGURES

FIGURE 1: Vicinity Map
FIGURE 2: Assessor's Parcel Map
FIGURE 3: DOGGR Oil and Gas Well Locations
FIGURE 4: Site Photographs



N

0 1,000 2,000

FEET

BASEMAP SOURCE: ESRI MAPPING SERVICE 2019

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VICINITY MAP

GAS COMPANY ROAD

TAFT, CALIFORNIA

PROJECT NO. : 16654.000.000

SCALE: AS SHOWN

DRAWN BY: JV CHECKED BY: SPM

FIGURE NO. 1

PATH: G:\DRAFTING\PROJECTS_16000 TO 17999\16654\16654000000\ENVIRONMENTAL\ESA\GIS\16654000000.APRX

USER: JVERGARA

ORIGINAL FIGURE PRINTED IN COLOR

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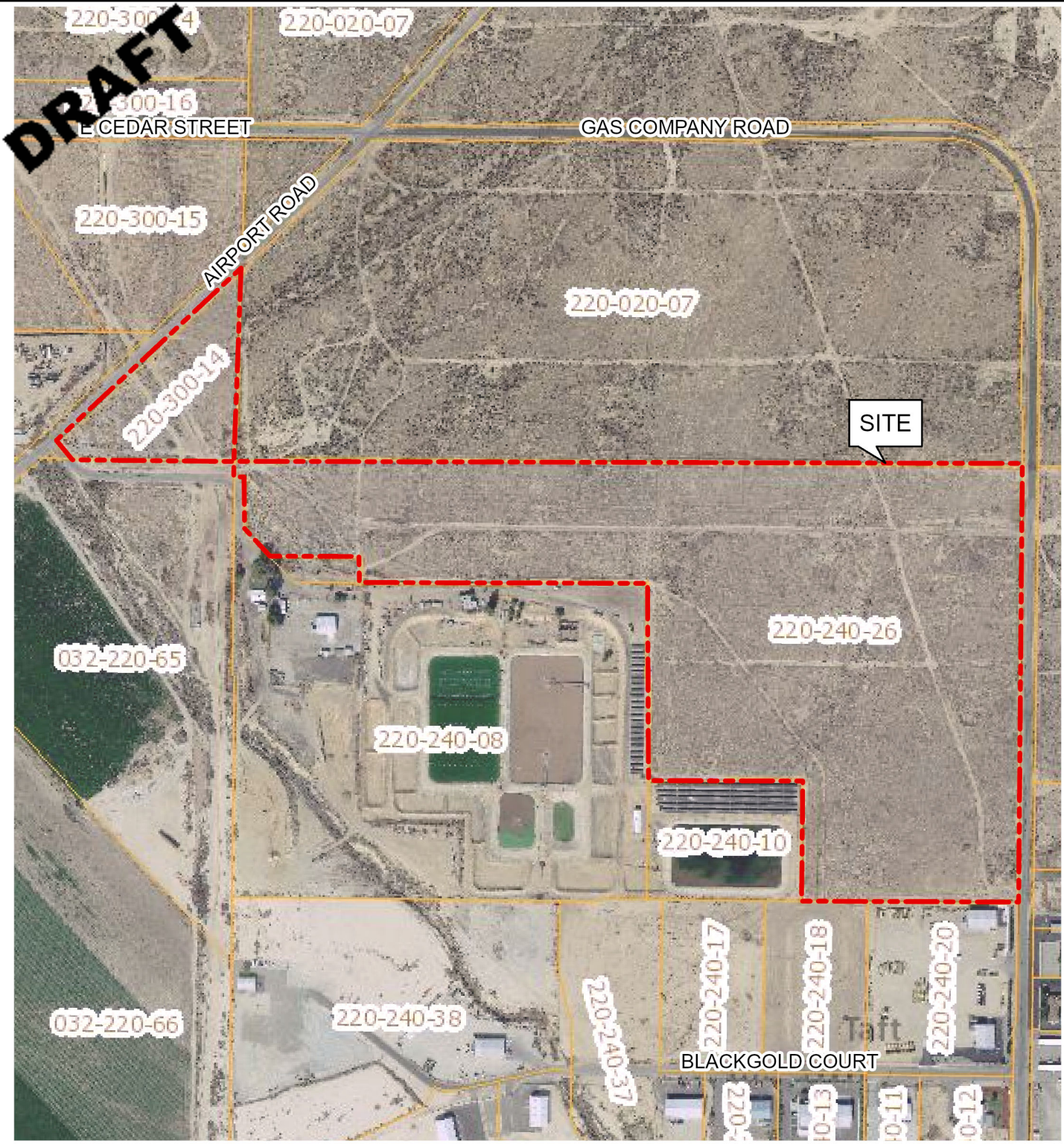

N

0 250 500

FEET

BASEMAP SOURCE: KERN COUNTY ASSESSOR'S OFFICE

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ASSESSOR'S PARCEL MAP

GAS COMPANY ROAD

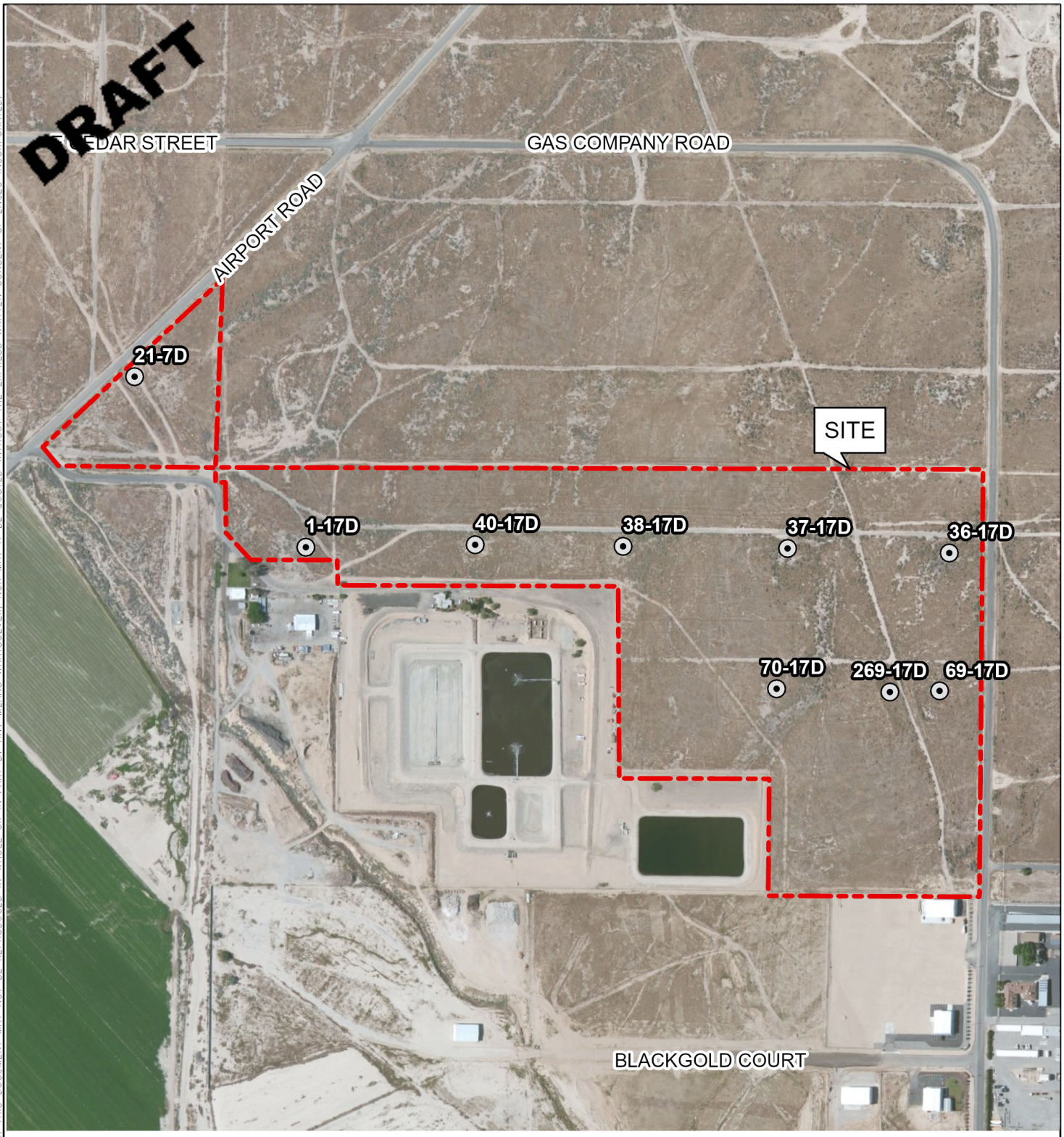
TAFT, CALIFORNIA

PROJECT NO. :	16654.000.000
SCALE:	AS SHOWN
DRAWN BY: JV	CHECKED BY: SPM

FIGURE NO. 2

PATH: G:\DRAFTING\PROJECTS_16000 TO 17999\16654\16654000000\ENVIRONMENTAL\ESA\GIS\16654000000.APRX
USER: JVERGARA

ORIGINAL FIGURE PRINTED IN COLOR



EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

⊙ PLUGGED OIL AND GAS (CA RESOURCES ELK HILLS, LLC 2018)

N

0 250 500

FEET

BASEMAP SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION AND ESRI MAPPING SERVICE 2019

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DOGGR OIL AND GAS WELL LOCATIONS

GAS COMPANY ROAD

TAFT, CALIFORNIA

PROJECT NO. :	16654.000.000
SCALE:	AS SHOWN
DRAWN BY: JV	CHECKED BY: SPM

FIGURE NO. 3

PATH: G:\DRAFTING\PROJECTS_16000 TO 17999\16654\16654000000\ENVIRONMENTAL\ESA\GIS\16654000000.APRX
USER: JVERGARA

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LOCATION OF FORMER OIL WELL 21-7D LOOKING SOUTHWEST

PETROLEUM PIPELINE SIGN AND PIPES LOOKING NORTHWEST

CONCRETE AND PIPE DEBRIS LOOKING WEST

LOCATION OF FORMER OIL WELL 1-17D LOOKING SOUTH

LOCATION OF FORMER OIL WELL 40-17D LOOKING NORTH

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SITE PHOTOGRAPHS
GAS COMPANY ROAD
TAFT, CALIFORNIA

PROJECT NUMBER: **16654.000.000**	FIGURE NO. 4A
SCALE: **NO SCALE**	
DRAWN BY: **JV**	CHECKED BY: **SPM**

ORIGINAL FIGURE PRINTED IN COLOR

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LOCATION OF FORMER OIL WELL 38-17D LOOKING SOUTH

LOCATION OF FORMER OIL WELL 37-17D LOOKING SOUTH

LOCATION OF FORMER OIL WELL 36-17D LOOKING SOUTHWEST

LOCATION OF FORMER OIL WELL 69-17D LOOKING SOUTH

LOCATION OF FORMER OIL WELL 269-17D LOOKING SOUTH

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SITE PHOTOGRAPHS
GAS COMPANY ROAD
TAFT, CALIFORNIA

PROJECT NUMBER: **16654.000.000**		FIGURE NO. 4B
SCALE: **NO SCALE**		
DRAWN BY: **JV**	CHECKED BY: **SPM**	

ORIGINAL FIGURE PRINTED IN COLOR

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LOCATION OF FORMER OIL WELL 70-17D LOOKING SOUTH

SOUTHERN BORDER OF PROPERTY LOOKING EAST

ABANDONED OIL WELL INFRASTRUCTURE IN SOUTHEAST AREA OF PROPERTY LOOKING WEST

ABANDONED OIL WELL INFRASTRUCTURE IN SOUTHEAST AREA OF PROPERTY LOOKING WEST

SOUTHERN BORDER OF PROPERTY LOOKING SOUTHEAST

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SITE PHOTOGRAPHS
GAS COMPANY ROAD
TAFT, CALIFORNIA

PROJECT NUMBER: **16654.000.000**		FIGURE NO. 4C
SCALE: **NO SCALE**		
DRAWN BY: **JV**	CHECKED BY: **SPM**	

ORIGINAL FIGURE PRINTED IN COLOR

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MISCELLANEOUS METAL DEBRIS IN NORTHWEST AREA OF PROPERTY

MISCELLANEOUS CAP IN CENTRAL AREA OF PROPERTY

MISCELLANEOUS CAP IN NORTHWEST AREA OF PROPERTY

MISCELLANEOUS CAP IN CENTRAL AREA OF PROPERTY

MISCELLANEOUS VALVE IN CENTRAL AREA OF PROPERTY

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SITE PHOTOGRAPHS
GAS COMPANY ROAD
TAFT, CALIFORNIA

PROJECT NUMBER: **16654.000.000**		FIGURE NO. 4D
SCALE: **NO SCALE**		
DRAWN BY: **JV**	CHECKED BY: **SPM**	

ORIGINAL FIGURE PRINTED IN COLOR

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MISCELLANEOUS VALVE IN CENTRAL AREA OF PROPERTY

MISCELLANEOUS VALVE IN CENTRAL AREA OF PROPERTY

MISCELLANEOUS PIT IN CENTRAL AREA OF PROPERTY

RUSTY PIPE DEBRIS LOOKING WEST IN NORTHWEST AREA OF PROPERTY

VACUUM PIPELINE IN NORTHWEST AREA OF PROPERTY

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SITE PHOTOGRAPHS
GAS COMPANY ROAD
TAFT, CALIFORNIA

PROJECT NUMBER: **16654.000.000**	FIGURE NO. 4F
SCALE: **NO SCALE**	
DRAWN BY: **JV**	CHECKED BY: **SPM**

ORIGINAL FIGURE PRINTED IN COLOR

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APPENDIX A

ENVIRONMENTAL DATA RESOURCES, INC.

Radius Map Report

Gas Company Road
Gas Company Road
Taft, CA 93268

Inquiry Number: 05811484.2r
October 01, 2019

The EDR Radius Map™ Report with GeoCheck®

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

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	67
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-13
Physical Setting Source Map Findings	A-14
Physical Setting Source Records Searched	PSGR-1

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

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

GAS COMPANY ROAD
TAFT, CA 93268

COORDINATES

Latitude (North):	35.1499260 - 35° 8' 59.73''
Longitude (West):	119.4237510 - 119° 25' 25.50''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	279205.4
UTM Y (Meters):	3892161.0
Elevation:	772 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5639118 TAFT, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140618
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
GAS COMPANY ROAD
TAFT, CA 93268

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	NAVAL PETROLEUM RESE		DOD	Same	1 ft.
A1	CITY YARD	ASH & AIRPORT ROAD	CA HIST UST	Lower	90, 0.017, WNW
A2	CITY OF TAFT-CORPORA	AIRPORT RD & ASH ST	CA UST	Lower	90, 0.017, WNW
A3	CORPORATION YARD	ASH & AIRPORT RD	CA SWEEPS UST	Lower	90, 0.017, WNW
A4	CITY YARD	ASH AND AIRPORT ROAD	CA HIST UST	Lower	90, 0.017, WNW
B5	HUDDLESTON CRANE SER	810 BLACK GOLD CT	CA CERS HAZ WASTE, CA CERS TANKS, CA CERS	Lower	516, 0.098, SSE
B6	HUDDLESTON CRANE SER	810 BLACKGOLD CT	RCRA NonGen / NLR	Lower	516, 0.098, SSE
B7	HUDDLESTON CRANE SER	810 BLACK GOLD CT	CA AST	Lower	516, 0.098, SSE
B8	HERC RENTALS INC (96	800 BLACKGOLD CT UNI	CA CERS HAZ WASTE, CA CERS TANKS, CA CERS	Lower	535, 0.101, SSE
B9	TAFT YARD	800 BLACKGOLD CT UNI	CA CERS HAZ WASTE, CA CERS	Lower	535, 0.101, SSE
B10	HERC RENTALS (9646-0	800A BLACKGOLD CT	RCRA NonGen / NLR	Lower	535, 0.101, SSE
B11	HERC RENTALS INC (96	800 BLACKGOLD CT UNI	CA AST	Lower	535, 0.101, SSE
C12	WESTSIDE CEMETERY DI	26901 CEDAR ST	CA SWEEPS UST	Higher	642, 0.122, NW
C13	WEST SIDE CEMETERY D	26910 CEDAR ST	CA UST	Higher	673, 0.127, NW
D14	KINGS OIL TOOLS, TAF	803 BLACKGOLD CT	CA CERS HAZ WASTE, CA CERS TANKS, CA CERS	Lower	868, 0.164, South
D15	KINGS OIL TOOLS	803 BLACKGOLD CT	RCRA NonGen / NLR	Lower	868, 0.164, South
D16	KINGS OIL TOOLS, TAF	803 BLACKGOLD CT	CA AST	Lower	868, 0.164, South
17	ASH STREET / TAFT #2	300 FT FR MARY ST	CA SWF/LF, CA CERS	Higher	1546, 0.293, WNW
18	SECTION 8 CENTRAL SW	1.7 MI E-NE/O FORD C	CA SWF/LF, CA CERS	Higher	1965, 0.372, NE
19	CHEVRON #2 BURN DUMP	T32S, R24E, SECT 17,	CA SWF/LF, CA CERS	Lower	2040, 0.386, SW
E20			CA WASTEWATER PITS	Lower	2161, 0.409, South
E21			CA WASTEWATER PITS	Lower	2162, 0.409, South
F22			CA WASTEWATER PITS	Lower	2170, 0.411, South
E23			CA WASTEWATER PITS	Lower	2175, 0.412, South
G24			CA WASTEWATER PITS	Lower	2202, 0.417, South
F25			CA WASTEWATER PITS	Lower	2208, 0.418, SSW
H26			CA WASTEWATER PITS	Lower	2266, 0.429, SSW
G27			CA WASTEWATER PITS	Lower	2316, 0.439, South
H28			CA WASTEWATER PITS	Lower	2327, 0.441, SSW
I29			CA WASTEWATER PITS	Lower	2379, 0.451, SSW
J30			CA WASTEWATER PITS	Lower	2458, 0.466, South
I31			CA WASTEWATER PITS	Lower	2458, 0.466, SSW
I32			CA WASTEWATER PITS	Lower	2491, 0.472, SSW
I33			CA WASTEWATER PITS	Lower	2550, 0.483, SSW
I34			CA WASTEWATER PITS	Lower	2554, 0.484, SSW
K35			CA WASTEWATER PITS	Lower	2604, 0.493, SSW
L36			CA WASTEWATER PITS	Lower	2617, 0.496, South
J37			CA WASTEWATER PITS	Lower	2618, 0.496, South
38			CA WASTEWATER PITS	Lower	2619, 0.496, SSE

MAPPED SITES SUMMARY

Target Property Address:
GAS COMPANY ROAD
TAFT, CA 93268

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K39			CA WASTEWATER PITS	Lower	2621, 0.496, SSW
L40			CA WASTEWATER PITS	Lower	2622, 0.497, South
41			CA WASTEWATER PITS	Lower	2632, 0.498, South
M42	LAIDLAW ENVIRONMENTA	7004 GAS COMPANY RD	CA ENVIROSTOR, CA EMI, CA CERS	Lower	4091, 0.775, SE
M43	LAIDLAW ENVIRONMENTA	7004 GAS COMPANY RD	CA HIST UST, CA HWP	Lower	4091, 0.775, SE
M44	G S X SERVICES OF CA	7004 GAS COMPANY RD	SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-SQG,...	Lower	4091, 0.775, SE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

CA RESPONSE ---------- State Response Sites

State and tribal leaking storage tank lists

CA LUST ---------- Geotracker's Leaking Underground Fuel Tank Report

INDIAN LUST - Leaking Underground Storage Tanks on Indian Land
CA CPS-SLIC - Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST - Underground Storage Tank Listing
INDIAN UST - Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

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

State and tribal Brownfields sites

CA 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

CA WMUDS/SWAT - Waste Management Unit Database
CA SWRCY - Recycler Database
CA HAULERS - Registered Waste Tire Haulers Listing
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands
ODI - Open Dump Inventory
DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS - Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

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

Local Lists of Registered Storage Tanks

CA FID UST - Facility Inventory Database

Local Land Records

CA LIENS - Environmental Liens Listing
LIENS 2 - CERCLA Lien Information
CA DEED - Deed Restriction Listing

Records of Emergency Release Reports

HMIRS - Hazardous Materials Information Reporting System

CA CHMIRS	California Hazardous Material Incident Report System
CA LDS	Land Disposal Sites Listing
CA MCS	Military Cleanup Sites Listing
CA 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
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CA Cortese	"Cortese" Hazardous Waste & Substances Sites List
CA CUPA Listings	CUPA Resources List
CA DRYCLEANERS	Cleaner Facilities
CA ENF	Enforcement Action Listing
CA Financial Assurance	Financial Assurance Information Listing
CA HAZNET	Facility and Manifest Data
CA ICE	ICE
CA HIST CORTESE	Hazardous Waste & Substance Site List
CA HWT	Registered Hazardous Waste Transporter Database
CA MINES	Mines Site Location Listing
CA MWMP	Medical Waste Management Program Listing
CA NPDES	NPDES Permits Listing
CA PEST LIC	Pesticide Regulation Licenses Listing

CA PROC Certified Processors Database
CA Notify 65 Proposition 65 Records
CA UIC UIC Listing
CA UIC GEO UIC GEO (GEOTRACKER)
CA WDS Waste Discharge System
CA WIP Well Investigation Program Case List
CA MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)
CA PROJECT PROJECT (GEOTRACKER)
CA WDR Waste Discharge Requirements Listing
CA CIWQS California Integrated Water Quality System
CA NON-CASE INFO NON-CASE INFO (GEOTRACKER)
CA OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
CA PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
CA SAMPLING POINT SAMPLING POINT (GEOTRACKER)
CA WELL STIM PROJ Well Stimulation Project (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

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

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

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

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

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

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA 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 03/25/2019 has revealed that there is 1

CORRACTS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
G S X SERVICES OF CA	***7004 GAS COMPANY RD***	***SE 1/2 - 1 (0.775 mi.)***	***M44***	***59***
EPA ID:: CAD089864805				

State- and tribal - equivalent CERCLIS

CA 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 CA ENVIROSTOR list, as provided by EDR, and dated 04/29/2019 has revealed that there is 1 CA ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAIDLAW ENVIRONMENTA	***7004 GAS COMPANY RD***	***SE 1/2 - 1 (0.775 mi.)***	***M42***	***50***
Facility Id: 80001708				
Status: Active				

State and tribal landfill and/or solid waste disposal site lists

CA SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the CA SWF/LF list, as provided by EDR, has revealed that there are 3 CA SWF/LF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ASH STREET / TAFT #2	***300 FT FR MARY ST***	***WNW 1/4 - 1/2 (0.293 mi.)***	***17***	***37***
Database: SWF/LF (SWIS), Date of Government Version: 05/13/2019				
Facility ID: 15-CR-0060				
Operational Status: Closed				
Regulation Status: Pre-regulations				
SECTION 8 CENTRAL SW	***1.7 MI E-NE/O FORD C***	***NE 1/4 - 1/2 (0.372 mi.)***	***18***	***38***
Database: SWF/LF (SWIS), Date of Government Version: 05/13/2019				
Facility ID: 15-CR-0062				
Operational Status: Closed				
Regulation Status: Unpermitted				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON #2 BURN DUMP	***T32S, R24E, SECT 17,***	***SW 1/4 - 1/2 (0.386 mi.)***	***19***	***39***
Database: SWF/LF (SWIS), Date of Government Version: 05/13/2019				

EXECUTIVE SUMMARY

Facility ID: 15-CR-0078
Operational Status: Closed
Regulation Status: Pre-regulations

State and tribal registered storage tank lists

CA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the CA UST list, as provided by EDR, has revealed that there are 2 CA UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WEST SIDE CEMETERY D	26910 CEDAR ST	NW 1/8 - 1/4 (0.127 mi.)	C13	29
Database: KERN CO. UST, Date of Government Version: 05/06/2019				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY OF TAFT-CORPORA	AIRPORT RD & ASH ST	WNW 0 - 1/8 (0.017 mi.)	A2	9
Database: KERN CO. UST, Date of Government Version: 05/06/2019				

CA AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the CA AST list, as provided by EDR, has revealed that there are 3 CA AST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUDDLESTON CRANE SER	810 BLACK GOLD CT	SSE 0 - 1/8 (0.098 mi.)	B7	17
Database: AST, Date of Government Version: 07/06/2016				
HERC RENTALS INC (96	800 BLACKGOLD CT UNI	SSE 0 - 1/8 (0.101 mi.)	B11	28
Database: AST, Date of Government Version: 07/06/2016				
KINGS OIL TOOLS, TAF	803 BLACKGOLD CT	S 1/8 - 1/4 (0.164 mi.)	D16	36
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CA CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CA CERS HAZ WASTE list, as provided by EDR, and dated 08/14/2019 has revealed that there are 4 CA CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUDDLESTON CRANE SER	***810 BLACK GOLD CT***	***SSE 0 - 1/8 (0.098 mi.)***	***B5***	***11***
HERC RENTALS INC (96	***800 BLACKGOLD CT UNI***	***SSE 0 - 1/8 (0.101 mi.)***	***B8***	***18***
TAFT YARD	***800 BLACKGOLD CT UNI***	***SSE 0 - 1/8 (0.101 mi.)***	***B9***	***25***
KINGS OIL TOOLS, TAF	***803 BLACKGOLD CT***	***S 1/8 - 1/4 (0.164 mi.)***	***D14***	***30***

Local Lists of Registered Storage Tanks

CA SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the CA SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 CA SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WESTSIDE CEMETERY DI Status: A Tank Status: A Comp Number: 340001	26901 CEDAR ST	NW 0 - 1/8 (0.122 mi.)	C12	29

Lower Elevation	Address	Direction / Distance	Map ID	Page
CORPORATION YARD Comp Number: 57906	ASH & AIRPORT RD	WNW 0 - 1/8 (0.017 mi.)	A3	9

CA HIST UST: Historical UST Registered Database.

A review of the CA HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 CA HIST UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY YARD Facility Id: 00000057906	ASH & AIRPORT ROAD	WNW 0 - 1/8 (0.017 mi.)	A1	8
CITY YARD	ASH AND AIRPORT ROAD	WNW 0 - 1/8 (0.017 mi.)	A4	10

CA CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CA CERS TANKS list, as provided by EDR, and dated 08/14/2019 has revealed that there are 3 CA CERS TANKS sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUDDLESTON CRANE SER	***810 BLACK GOLD CT***	***SSE 0 - 1/8 (0.098 mi.)***	***B5***	***11***
HERC RENTALS INC (96	***800 BLACKGOLD CT UNI***	***SSE 0 - 1/8 (0.101 mi.)***	***B8***	***18***
KINGS OIL TOOLS, TAF	***803 BLACKGOLD CT***	***S 1/8 - 1/4 (0.164 mi.)***	***D14***	***30***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/25/2019 has revealed that there are 3 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUDDLESTON CRANE SER EPA ID:: CAL000354051	810 BLACKGOLD CT	SSE 0 - 1/8 (0.098 mi.)	B6	16
HERC RENTALS (9646-0 EPA ID:: CAL000378832	800A BLACKGOLD CT	SSE 0 - 1/8 (0.101 mi.)	B10	27
KINGS OIL TOOLS EPA ID:: CAL000401284	803 BLACKGOLD CT	S 1/8 - 1/4 (0.164 mi.)	D15	35

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
NAVAL PETROLEUM RESE		0 - 1/8 (0.000 mi.)	0	8

CA HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the CA HWP list, as provided by EDR, and dated 05/20/2019 has revealed that there is 1 CA HWP site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAIDLAW ENVIRONMENTA EPA Id: CAD089864805 Cleanup Status: CLOSED	***7004 GAS COMPANY RD***	***SE 1/2 - 1 (0.775 mi.)***	***M43***	***56***

CA WASTEWATER PITS: Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

A review of the CA WASTEWATER PITS list, as provided by EDR, and dated 05/08/2018 has revealed that

there are 22 CA WASTEWATER PITS sites within approximately 0.5 miles of the target property.

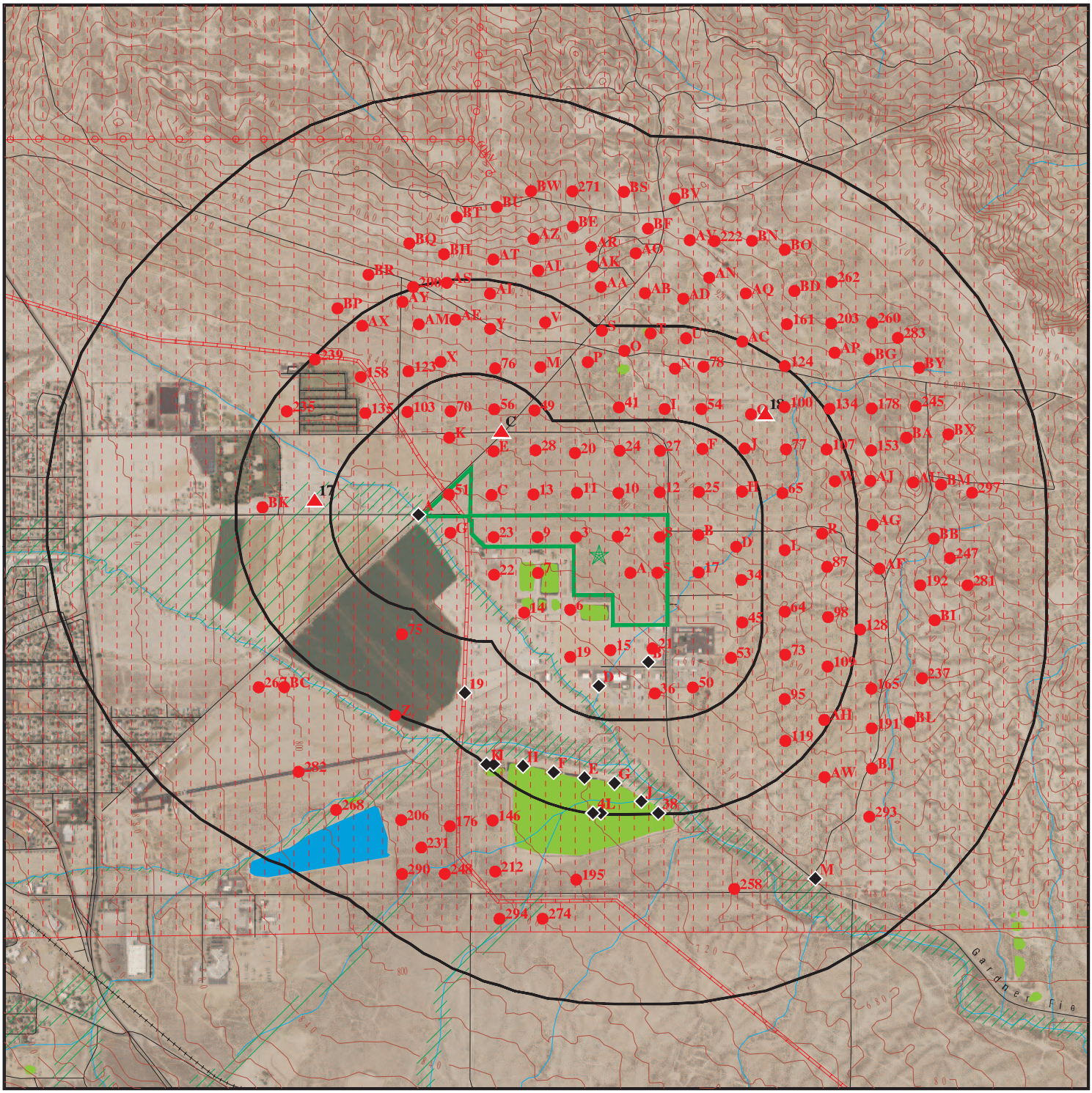
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported		S 1/4 - 1/2 (0.409 mi.)	E20	41
Not reported		S 1/4 - 1/2 (0.409 mi.)	E21	41
Not reported		S 1/4 - 1/2 (0.411 mi.)	F22	42
Not reported		S 1/4 - 1/2 (0.412 mi.)	E23	42
Not reported		S 1/4 - 1/2 (0.417 mi.)	G24	42
Not reported		SSW 1/4 - 1/2 (0.418 mi.)	F25	43
Not reported		SSW 1/4 - 1/2 (0.429 mi.)	H26	43
Not reported		S 1/4 - 1/2 (0.439 mi.)	G27	44
Not reported		SSW 1/4 - 1/2 (0.441 mi.)	H28	44
Not reported		SSW 1/4 - 1/2 (0.451 mi.)	I29	44
Not reported		S 1/4 - 1/2 (0.466 mi.)	J30	45
Not reported		SSW 1/4 - 1/2 (0.466 mi.)	I31	45
Not reported		SSW 1/4 - 1/2 (0.472 mi.)	I32	46
Not reported		SSW 1/4 - 1/2 (0.483 mi.)	I33	46
Not reported		SSW 1/4 - 1/2 (0.484 mi.)	I34	46
Not reported		SSW 1/4 - 1/2 (0.493 mi.)	K35	47
Not reported		S 1/4 - 1/2 (0.496 mi.)	L36	47
Not reported		S 1/4 - 1/2 (0.496 mi.)	J37	48
Not reported		SSE 1/4 - 1/2 (0.496 mi.)	38	48
Not reported		SSW 1/4 - 1/2 (0.496 mi.)	K39	48
Not reported		S 1/4 - 1/2 (0.497 mi.)	L40	49
Not reported		S 1/4 - 1/2 (0.498 mi.)	41	49

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
SO CAL GAS CO - TAFT REPEATER	FINDS
TEXACO-BUENA VISTA HILLS GAS	TSCA

OVERVIEW MAP - 05811484.2R



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

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

SITE NAME: Gas Company Road ADDRESS: Gas Company Road Taft CA 93268 LAT/LONG: 35.149926 / 119.423751	CLIENT: Engeo Inc. CONTACT: Katherina Zecca INQUIRY #: 05811484.2r DATE: October 01, 2019 2:51 pm

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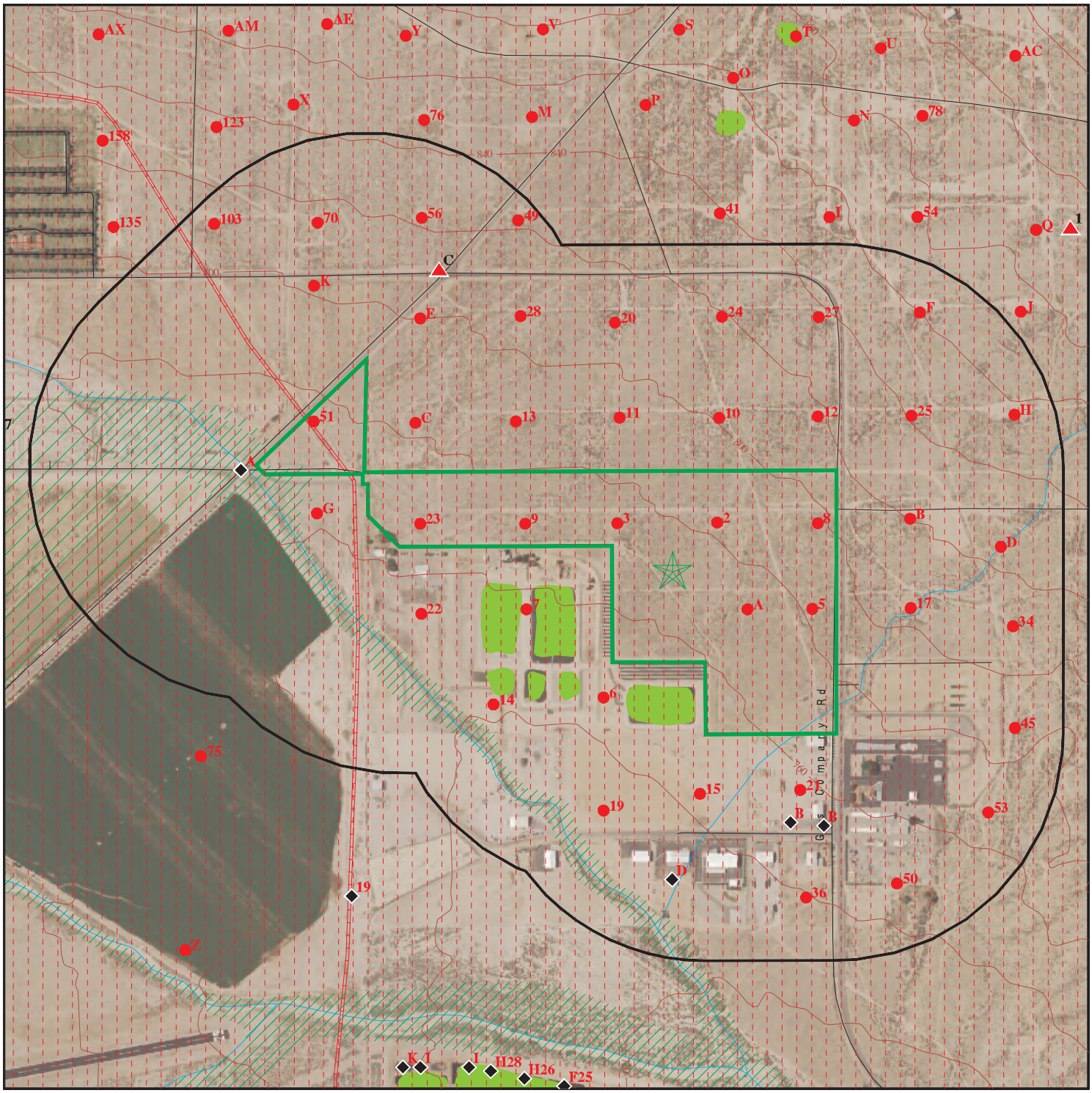
DETAIL MAP - 05811484.2R



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

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

SITE NAME: Gas Company Road ADDRESS: Gas Company Road Taft CA 93268 LAT/LONG: 35.149926 / 119.423751	CLIENT: Engeo Inc. CONTACT: Katherina Zecca INQUIRY #: 05811484.2r DATE: October 01, 2019 2:55 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
CA RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
CA ENVIROSTOR	1.000		0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
CA SWF/LF	0.500		0	0	3	NR	NR	3
State and tribal leaking storage tank lists								
CA 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
CA CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
CA UST	0.250		1	1	NR	NR	NR	2
CA AST	0.250		2	1	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
CA VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
CA 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								
CA WMUDS/SWAT	0.500		0	0	0	NR	NR	0
CA SWRCY	0.500		0	0	0	NR	NR	0
CA HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CA HIST Cal-Sites	1.000		0	0	0	0	NR	0
CA SCH	0.250		0	0	NR	NR	NR	0
CA CDL	0.001		0	NR	NR	NR	NR	0
CA CERS HAZ WASTE	0.250		3	1	NR	NR	NR	4
CA Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
CA PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
CA SWEEPS UST	0.250		2	0	NR	NR	NR	2
CA HIST UST	0.250		2	0	NR	NR	NR	2
CA FID UST	0.250		0	0	NR	NR	NR	0
CA CERS TANKS	0.250		2	1	NR	NR	NR	3
Local Land Records								
CA LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
CA DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CA CHMIRS	0.001		0	NR	NR	NR	NR	0
CA LDS	0.001		0	NR	NR	NR	NR	0
CA MCS	0.001		0	NR	NR	NR	NR	0
CA SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	1	NR	NR	NR	3
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		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	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CA Cortese	0.500		0	0	0	NR	NR	0
CA CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CA EMI	0.001		0	NR	NR	NR	NR	0
CA ENF	0.001		0	NR	NR	NR	NR	0
CA Financial Assurance	0.001		0	NR	NR	NR	NR	0
CA HAZNET	0.001		0	NR	NR	NR	NR	0
CA ICE	0.001		0	NR	NR	NR	NR	0
CA HIST CORTESE	0.500		0	0	0	NR	NR	0
CA HWP	1.000		0	0	0	1	NR	1
CA HWT	0.250		0	0	NR	NR	NR	0
NY MANIFEST	0.250		0	0	NR	NR	NR	0
CA MINES	0.250		0	0	NR	NR	NR	0
CA MWMP	0.250		0	0	NR	NR	NR	0
CA NPDES	0.001		0	NR	NR	NR	NR	0
CA PEST LIC	0.001		0	NR	NR	NR	NR	0
CA PROC	0.500		0	0	0	NR	NR	0
CA Notify 65	1.000		0	0	0	0	NR	0
CA UIC	0.001		0	NR	NR	NR	NR	0
CA UIC GEO	0.001		0	NR	NR	NR	NR	0
CA WASTEWATER PITS	0.500		0	0	22	NR	NR	22
CA WDS	0.001		0	NR	NR	NR	NR	0
CA WIP	0.250		0	0	NR	NR	NR	0
CA MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
CA PROJECT	0.001		0	NR	NR	NR	NR	0
CA WDR	0.001		0	NR	NR	NR	NR	0
CA CIWQS	0.001		0	NR	NR	NR	NR	0
CA CERS	0.001		0	NR	NR	NR	NR	0
CA NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
CA OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
CA PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CA SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
CA WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
CA RGA LF	0.001		0	NR	NR	NR	NR	0
CA RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	15	5	25	3	0	48

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD **NAVAL PETROLEUM RESERVE NUMBER TWO** **DOD** **CUSA139843**
Region **N/A**

NAVAL PETROLEUM RESERVE N (County), CA

< 1/8
1 ft.

DOD:
Feature 1: Navy DOD
Feature 2: Not reported
Feature 3: Not reported
URL: Not reported
Name 1: Naval Petroleum Reserve Number Two
Name 2: Not reported
Name 3: Not reported
State: CA
DOD Site: Yes
Tile name: CAKERN

A1 **CITY YARD** **CA HIST UST** **U001582740**
WNW **ASH & AIRPORT ROAD** **N/A**
< 1/8 **TAFT, CA 93268**
0.017 mi.
90 ft. **Site 1 of 4 in cluster A**

Relative:
Lower

Actual:
770 ft.

HIST UST:
Name: CITY YARD
Address: ASH & AIRPORT ROAD
City,State,Zip: TAFT, CA 93268
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000057906
Facility Type: Other
Other Type: CITY GOVERNMENT
Contact Name: BILL KYTOLA
Telephone: 8057633144
Owner Name: CITY OF TAFT
Owner Address: 209 E. KERN STREET
Owner City,St,Zip: TAFT, CA 93268
Total Tanks: 0002

Tank Num: 001
Container Num: 3
Year Installed: 1979
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 4
Year Installed: 1979
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

A2 **CITY OF TAFT-CORPORATION YARD** **CA UST** **U004112527**
WNW **AIRPORT RD & ASH ST** **N/A**
< 1/8 **TAFT, CA**
0.017 mi.
90 ft. **Site 2 of 4 in cluster A**

Relative: KERN CO. UST:
Lower

Name:	CITY OF TAFT-CORPORATION YARD
Address:	AIRPORT RD & ASH ST
City:	TAFT
Region:	Kern
Facility ID:	Not reported
CERSID:	Not reported
Owner Id:	350041
Owner Name:	CITY OF TAFT
Tank Num:	1
Tank Capacity:	0
Common Name:	Not reported
Description:	Not reported
Number of Compartments:	Not reported
Install Date:	Not reported
Date of Closure:	Not reported
Billing Status:	Not reported
Mailing Address:	Not reported
Mailing Address (care of):	Not reported
Mailing City/State/Zip:	Not reported

Actual:
770 ft.

A3 **CORPORATION YARD** **CA SWEEPS UST** **S106924927**
WNW **ASH & AIRPORT RD** **N/A**
< 1/8 **TAFT, CA 93268**
0.017 mi.
90 ft. **Site 3 of 4 in cluster A**

Relative: SWEEPS UST:
Lower

Name:	CORPORATION YARD
Address:	ASH & AIRPORT RD
City:	TAFT
Status:	Not reported
Comp Number:	57906
Number:	Not reported
Board Of Equalization:	44-006415
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	15-000-057906-000001
Tank Status:	Not reported
Capacity:	2000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	2
Name:	CORPORATION YARD
Address:	ASH & AIRPORT RD
City:	TAFT
Status:	Not reported
Comp Number:	57906

Actual:
770 ft.

CORPORATION YARD (Continued) **S106924927**

Number:	Not reported
Board Of Equalization:	44-006415
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	15-000-057906-000002
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	DIESEL
Number Of Tanks:	Not reported

A4 **CITY YARD** **CA HIST UST** **S118408716**
WNW **ASH AND AIRPORT ROAD** **N/A**
< 1/8 **TAFT, CA 93268**
0.017 mi.
90 ft. **Site 4 of 4 in cluster A**

Relative: HIST UST:
Lower

Actual:
770 ft.

Name:	CITY YARD
Address:	ASH AND AIRPORT ROAD
City,State,Zip:	TAFT, CA 93268
File Number:	000246E0
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000246E0.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

B5 **HUDDLESTON CRANE SERVICE** **CA CERS HAZ WASTE** **S121741266**
SSE **810 BLACK GOLD CT** **CA CERS TANKS** **N/A**
< 1/8 **TAFT, CA 93268** **CA CERS**
0.098 mi.
516 ft. **Site 1 of 7 in cluster B**

Relative:
Lower

Actual:
751 ft.

CERS HAZ WASTE:
Name: HUDDLESTON CRANE SERVICE
Address: 810 BLACK GOLD CT
City,State,Zip: TAFT, CA 93268
Site ID: 123436
CERS ID: 10234801
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: HUDDLESTON CRANE SERVICE
Address: 810 BLACK GOLD CT
City,State,Zip: TAFT, CA 93268
Site ID: 123436
CERS ID: 10234801
CERS Description: Aboveground Petroleum Storage

CERS:
Name: HUDDLESTON CRANE SERVICE
Address: 810 BLACK GOLD CT
City,State,Zip: TAFT, CA 93268
Site ID: 123436
CERS ID: 10234801
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Violation Date: 06-05-2018
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to label stationary hazardous waste tanks as "hazardous waste" and mark with an accumulation start date.
Violation Notes: Returned to compliance on 07/26/2018. PLEASE ENSURE HAZWASTE ACCUMULATION LABELS ARE MAINTAINED.
Violation Division: Kern County Env Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Violation Date: 06-05-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 07/24/2018. THE LAST SUBMISSION OF THE HAZARDOUS MATERIALS BUSINESS PLAN (HMBP) WAS 09/21/2016. ALL ELEMENTS OF THE HMBP MUST BE REVIEWED, CERTIFIED, AND SUBMITTED ON AN ANNUAL BASIS. THIS INCLUDES THE FACILITY INFORMATION, HAZMAT INVENTORY, AND CONTINGENCY/TRAINING PLANS. PLEASE SUBMIT HMBP ON AN ANNUAL BASIS.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP

HUDDLESTON CRANE SERVICE (Continued) **S121741266**

Violation Source: CERS

Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Violation Date: 03-23-2016
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 04/12/2016. Facility did not submit their 2015 annual HMBP in CERS. Sent a reminder notice on February 18, 2016 and did not comply by provided deadline of March 18, 2016. Current deadline is April 8, 2016 or will pursue Administrative Enforcement Order and office hearing for non-compliance.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Violation Date: 02-25-2014
Citation: HSC 6.95 25505(a) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)
Violation Description: Owner/Operator failed to complete and/or submit a Hazardous Materials Business Plan when storing hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet.
Violation Notes: Returned to compliance on 03/04/2014. Failure to submit in CERS
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 02-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department

HUDDLESTON CRANE SERVICE (Continued) **S121741266**

Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-18-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-18-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-18-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Site Address: 810 BLACK GOLD CT
Site City: TAFT
Site Zip: 93268
Enf Action Date: 02-25-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection

HUDDLESTON CRANE SERVICE (Continued) **S121741266**

Enf Action Notes: Not reported
Enf Action Division: Kern County Env Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 123436
Site Name: HUDDLESTON CRANE SERVICE
Site Address: 810 BLACK GOLD CT
Site City: TAFT
Site Zip: 93268
Enf Action Date: 03-23-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Kern County Env Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Kern County Environmental Health Services Departme
Entity Title: Not reported
Affiliation Address: 2700 M Street, Suite 300
Affiliation City: Bakersfield
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93301-2370
Affiliation Phone: (661) 862-8740

Affiliation Type Desc: Property Owner
Entity Name: Dave Noerr
Entity Title: Not reported
Affiliation Address: 810 BLACK GOLD CT
Affiliation City: TAFT
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 93268
Affiliation Phone: (661) 765-7059

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: PO BOX 206
Affiliation City: TAFT
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93268
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Dave Noerr
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

HUDDLESTON CRANE SERVICE (Continued) **S121741266**

Affiliation Phone:	(661) 765-7059
Affiliation Type Desc:	Document Preparer
Entity Name:	Kim Perry
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	KIM PERRY
Entity Title:	Not reported
Affiliation Address:	PO BOX 206
Affiliation City:	TAFT
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93268
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Dave Noerr
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	HUDDLESTON CRANE INC
Entity Title:	Not reported
Affiliation Address:	PO BOX 206
Affiliation City:	TAFT
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93268
Affiliation Phone:	(661) 765-7059
Affiliation Type Desc:	Parent Corporation
Entity Name:	HUDDLESTON CRANE SERVICE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B6 **HUDDLESTON CRANE SERVICE INC** **RCRA NonGen / NLR** **1024826416**
SSE **810 BLACKGOLD CT** **CAL000354051**
< 1/8 **TAFT, CA 93268**
0.098 mi.
516 ft. **Site 2 of 7 in cluster B**

Relative:
Lower

Actual:
751 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/25/2010
Facility name:	HUDDLESTON CRANE SERVICE INC
Facility address:	810 BLACKGOLD CT TAFT, CA 93268-9736
EPA ID:	CAL000354051
Mailing address:	PO BOX 206 810 BLACK GOLD CT TAFT, CA 93268-0000
Contact:	KIM PERRY
Contact address:	810 BLACKGOLD CT PO BOX 206 TAFT, CA 93268
Contact country:	Not reported
Contact telephone:	661-765-7059
Contact email:	KIM@HUDDLESTONCRANE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	KIM PERRY
Owner/operator address:	810 BLACKGOLD CT PO BOX 206 TAFT, CA 93268
Owner/operator country:	Not reported
Owner/operator telephone:	661-765-7059
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DAVE NOERR
Owner/operator address:	PO BOX 206 810 BLACK GOLD CT TAFT, CA 93268
Owner/operator country:	Not reported
Owner/operator telephone:	661-765-7059
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No

HUDDLESTON CRANE SERVICE INC (Continued) **1024826416**

Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B7 **HUDDLESTON CRANE SERVICE** **CA AST** **A100420879**
SSE **810 BLACK GOLD CT** **N/A**
< 1/8 **TAFT, CA 93268**
0.098 mi.
516 ft. **Site 3 of 7 in cluster B**

Relative: AST:
Lower

Actual:
751 ft.

Name:	HUDDLESTON CRANE SERVICE
Address:	810 BLACK GOLD CT
City/Zip:	TAFT,93268
Certified Unified Program Agencies:	Not reported
Owner:	HUDDLESTON CRANE INC
Total Gallons:	Not reported
CERSID:	10234801
Facility ID:	FA0003634
Business Name:	HUDDLESTON CRANE SERVICE
Phone:	(661) 765-7059
Fax:	(661) 765-4058
Mailing Address:	PO BOX 206
Mailing Address City:	TAFT
Mailing Address State:	CA
Mailing Address Zip Code:	93268
Operator Name:	Dave Noerr
Operator Phone:	661-765-7059
Owner Phone:	(661) 765-7059
Owner Mail Address:	PO BOX 206
Owner State:	CA
Owner Zip Code:	93268
Owner Country:	United States
Property Owner Name:	Dave Noerr
Property Owner Phone:	6617657059
Property Owner Mailing Address:	810 BLACK GOLD CT
Property Owner City:	TAFT
Property Owner Stat :	CA
Property Owner Zip Code:	93268
Property Owner Country:	United States
EPAID:	CAL000354051

B8 **HERC RENTALS INC (9646-00)** **CA CERS HAZ WASTE** **S121758745**
SSE **800 BLACKGOLD CT UNIT A** **CA CERS TANKS** **N/A**
< 1/8 **TAFT, CA 93268** **CA CERS**
0.101 mi.
535 ft. **Site 4 of 7 in cluster B**

Relative:
Lower

Actual:
753 ft.

CERS HAZ WASTE:
Name: HERC RENTALS INC (9646-00)
Address: 800 BLACKGOLD CT UNIT A
City,State,Zip: TAFT, CA 93268
Site ID: 274370
CERS ID: 10620232
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: HERC RENTALS INC (9646-00)
Address: 800 BLACKGOLD CT UNIT A
City,State,Zip: TAFT, CA 93268
Site ID: 274370
CERS ID: 10620232
CERS Description: Aboveground Petroleum Storage

Name: CAPCO - KERN1
Address: 800 BLACKGOLD CT UNIT D
City,State,Zip: TAFT, CA 93268
Site ID: 444531
CERS ID: 10774645
CERS Description: Aboveground Petroleum Storage

CERS:
Name: CAPCO - KERN1
Address: 800 BLACKGOLD CT UNIT D
City,State,Zip: TAFT, CA 93268
Site ID: 444531
CERS ID: 10774645
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 444531
Site Name: CAPCO - Kern1
Violation Date: 03-15-2019
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: update the max daily amount of Paratherm HE form 110gal to 250gal. add Paratherm HT and Nitrogen to the inventory.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-15-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported

HERC RENTALS INC (9646-00) (Continued) **S121758745**

Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Darin Diorio
Entity Title: Not reported
Affiliation Address: 800 black gold ct. #D
Affiliation City: Taft
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93268
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 800 black gold ct. #D,
Affiliation City: Taft
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93268
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Kern1
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Darin Diorio
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Darin Diorio
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: CAPCO Worldwide, Inc.

HERC RENTALS INC (9646-00) (Continued) **S121758745**

Entity Title:	Not reported
Affiliation Address:	505 Market st suite A
Affiliation City:	Kirkland
Affiliation State:	WA
Affiliation Country:	United States
Affiliation Zip:	98033
Affiliation Phone:	(425) 242-7540
Affiliation Type Desc:	Property Owner
Entity Name:	CAPCO Worldwide, Inc.
Entity Title:	Not reported
Affiliation Address:	505 Market st suite A
Affiliation City:	Kirkland
Affiliation State:	WA
Affiliation Country:	United States
Affiliation Zip:	98033
Affiliation Phone:	(425) 242-7540
Affiliation Type Desc:	CUPA District
Entity Name:	Kern County Environmental Health Services Departme
Entity Title:	Not reported
Affiliation Address:	2700 M Street, Suite 300
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740
Affiliation Type Desc:	Operator
Entity Name:	Darin Diorio
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(661) 426-9208

Name:	HERC RENTALS INC (9646-00)
Address:	800 BLACKGOLD CT UNIT A
City,State,Zip:	TAFT, CA 93268
Site ID:	274370
CERS ID:	10620232
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	274370
Site Name:	Herc Rentals Inc (9646-00)
Violation Date:	03-13-2019
Citation:	HSC 6.5 25250.22 - California Health and Safety Code, Chapter 6.5, Section(s) 25250.22
Violation Description:	Failure to properly manage used oil and/or fuel filters in accordance with the requirements.
Violation Notes:	Returned to compliance on 03/13/2019. During the course of the inspection, it was observed that the 2 Used Oil Filters drums did not have a accumulated start date. This violation was corrected on site and no further action is required.

HERC RENTALS INC (9646-00) (Continued) **S121758745**

Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	274370
Site Name:	Herc Rentals Inc (9646-00)
Violation Date:	03-13-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Please update the Site Map to include new chemicals added to CERS. Also, please visit the Environmental Health website to review Site Map requirements to add to the Site Map. The Site Map should include: Site orientation (North, South, etc.) Date map was drawn Location of all buildings and other structures Parking lots and internal roads Hazardous materials/waste storage areas Storm drain, sanitary sewer drain inlets, dry wells All wells (water, monitoring of underground systems, etc.) if applicable Evacuation routes, emergency exits, and staging/meeting areas Adjacent property use Locations and names of adjacent streets and alleys Entrance and exit points/roads General purpose of each section/area within each building (e.g. ?Office Area?, ?Manufacturing Area?, etc.) Location of each hazardous materials/waste storage, dispensing, use, or handling area (e.g. individual underground tanks, above-ground tanks, storage rooms, etc.) Entrances to and exits from [Truncated]
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	274370
Site Name:	Herc Rentals Inc (9646-00)
Violation Date:	04-11-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 05/03/2016. The Employee Training Plan that has been submitted does not describe the specific information/instructions employees receive when given training. You may choose to utilize this template http://ckld-2pyn.accessdomain.com/pubhlth1/wp-content/uploads/2015/01/3EMPLOYEETRAININGPLANREQUIREMENTSANDTEMPLATE.pdf to assist you. Please discard the old plan, upload the new/corrected plan, and resubmit with all other elements once all corrections have been made. Please make corrections and resubmit within 30 days.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	274370
Site Name:	Herc Rentals Inc (9646-00)
Violation Date:	04-11-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate emergency

HERC RENTALS INC (9646-00) (Continued) **S121758745**

response plan and procedures for a release or threatened release of a hazardous material.

Violation Notes: Returned to compliance on 05/03/2016. The phone number listed on the Emergency Response/Contingency Plan for Local Unified Program Agency/CUPA (Kern County Environmental Health Department) is incorrect. The phone number should be 661-862-8740 for Monday-Friday 8-5 and 661-549-9927 for 24 hour emergency response/spill notification. Please discard the old plan, upload the new/corrected plan, and resubmit with all other elements once all corrections have been made.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 274370
Site Name: Herc Rentals Inc (9646-00)
Violation Date: 04-11-2016
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain and/or maintain an Active EPA ID.
Violation Notes: Returned to compliance on 05/02/2016. EPA ID PROVIDED ONTO CERS EXPIRED ON 8/30/13. OBTAIN AND/OR MAINTAIN AN ACTIVE EPA ID. PLEASE NOTIFY YOUR INSPECTOR WAQAR RUSTAM VIA EMAIL- rustamw@co.kern.ca.us ONCE THE INFORMATION HAS BEEN UPDATED ONTO CERS.
Violation Division: Kern County Env Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 274370
Site Name: Herc Rentals Inc (9646-00)
Violation Date: 04-11-2016
Citation: 19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes: Returned to compliance on 05/03/2016. In "Business Activities" you must enter your EPA ID number, as the facility is a hazardous waste generator.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 274370
Site Name: Herc Rentals Inc (9646-00)
Violation Date: 03-13-2019
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler’s operations that requires modification to any portion of the business plan.
Violation Notes: The facilities hazardous material/waste inventory was not accurate. Please update/include the following items on the California Environmental Reporting System (CERS). 1.) Sulfuric Acid Batteries -

HERC RENTALS INC (9646-00) (Continued) **S121758745**

500 lbs 2.) Oxygen 250 CF 3.) Grease 500 lbs 4.) Propane 55 gallons
This violation shall be corrected within 30 days.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Please update CERS maximum daily to include tank size.
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-11-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-11-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-11-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported

HERC RENTALS INC (9646-00) (Continued) **S121758745**

Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Operator
Entity Name: Herc Rentals Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (239) 301-1161

Affiliation Type Desc: Parent Corporation
Entity Name: Herc Rentals Inc. (fka Hertz Equipment Rental Corp.)
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Robert de los Santos
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Michelle Cevallos
Entity Title: Not reported
Affiliation Address: 27500 Riverview Center Blvd.
Affiliation City: Bonita Springs
Affiliation State: FL
Affiliation Country: Not reported
Affiliation Zip: 34134
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Herc Rentals Inc
Entity Title: Not reported
Affiliation Address: 27500 Riverview Center Blvd.
Affiliation City: Bonita Springs
Affiliation State: FL
Affiliation Country: United States
Affiliation Zip: 34134
Affiliation Phone: (239) 948-4515

Affiliation Type Desc: CUPA District
Entity Name: Kern County Environmental Health Services Departme

HERC RENTALS INC (9646-00) (Continued) **S121758745**

Entity Title:	Not reported
Affiliation Address:	2700 M Street, Suite 300
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	27500 Riverview Center Blvd.
Affiliation City:	Bonita Springs
Affiliation State:	FL
Affiliation Country:	Not reported
Affiliation Zip:	34134
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	David Ullyot
Entity Title:	Branch Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B9 **TAFT YARD** **CA CERS HAZ WASTE** **S124442489**
SSE **800 BLACKGOLD CT UNIT B** **CA CERS** **N/A**
< 1/8 **TAFT, CA 93268**
0.101 mi.
535 ft. **Site 5 of 7 in cluster B**

Relative:
Lower

Actual:
753 ft.

CERS HAZ WASTE:

Name:	TAFT YARD
Address:	800 BLACKGOLD CT UNIT B
City,State,Zip:	TAFT, CA 93268
Site ID:	550702
CERS ID:	10771381
CERS Description:	Hazardous Waste Generator

CERS:

Name:	TAFT YARD
Address:	800 BLACKGOLD CT UNIT B
City,State,Zip:	TAFT, CA 93268
Site ID:	550702
CERS ID:	10771381
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	MARK SMITH
Entity Title:	Not reported
Affiliation Address:	PO Box 1199
Affiliation City:	Bakersfield
Affiliation State:	CA

TAFT YARD (Continued) **S124442489**

Affiliation Country:	Not reported
Affiliation Zip:	93302
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 1199
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93302
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Mark Smith
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Schlumberger Rod Lift
Entity Title:	Not reported
Affiliation Address:	PO Box 1199
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93302
Affiliation Phone:	(661) 323-0487
Affiliation Type Desc:	Parent Corporation
Entity Name:	Schlumberger Rod Lift, KBA Engineering
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Kern County Environmental Health Services Departme
Entity Title:	Not reported
Affiliation Address:	2700 M Street, Suite 300
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740
Affiliation Type Desc:	Identification Signer
Entity Name:	Mark Smith
Entity Title:	Risk/Compliance Manager

TAFT YARD (Continued) **S124442489**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Schlumberger Rod Lift
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(661) 323-0487

B10 **HERC RENTALS (9646-00)** **RCRA NonGen / NLR** **1024836054**
SSE **800A BLACKGOLD CT** **CAL000378832**
< 1/8 **TAFT, CA 93268**
0.101 mi.
535 ft. **Site 6 of 7 in cluster B**

Relative:
Lower

Actual:
753 ft.

RCRA NonGen / NLR:

Date form received by agency:	10/08/2012
Facility name:	HERC RENTALS (9646-00)
Facility address:	800A BLACKGOLD CT TAFT, CA 93268
EPA ID:	CAL000378832
Mailing address:	27500 RIVERVIEW CENTER BLVD. BONITA SPRINGS, FL 34134-0000
Contact:	ROBERT DE LOS SANTOS
Contact address:	262 MICHELLE CT SOUTH SAN FRANCISCO, CA 94080-0000
Contact country:	Not reported
Contact telephone:	650-616-1277
Contact email:	RDELOSSANTOS@TECACCUTITE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	HERC RENTALS, INC.
Owner/operator address:	27500 RIVERVIEW CENTER BLVD. BONITA SPRINGS, FL 34134
Owner/operator country:	Not reported
Owner/operator telephone:	239-301-1161
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	ROBERT DE LOS SANTOS

HERC RENTALS (9646-00) (Continued) **1024836054**

Owner/operator address:	262 MICHELLE CT SOUTH SAN FRANCISCO, CA 94080
Owner/operator country:	Not reported
Owner/operator telephone:	650-616-1277
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

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

Violation Status: No violations found

B11 **HERC RENTALS INC (9646-00)** **CA AST** **A100420724**
SSE **800 BLACKGOLD CT UNIT A** **N/A**
< 1/8 **TAFT, CA 93268**
0.101 mi.
535 ft. **Site 7 of 7 in cluster B**

Relative: AST:
Lower

Actual: **753 ft.**

Name:	HERC RENTALS INC (9646-00)
Address:	800 BLACKGOLD CT UNIT A
City/Zip:	TAFT,93268
Certified Unified Program Agencies:	Not reported
Owner:	Herc Rentals Inc
Total Gallons:	Not reported
CERSID:	10620232
Facility ID:	Not reported
Business Name:	Hertz Equipment Rental Corporation
Phone:	239-301-1161
Fax:	Not reported
Mailing Address:	27500 Riverview Center Blvd.
Mailing Address City:	Bonita Springs
Mailing Address State:	FL
Mailing Address Zip Code:	34134
Operator Name:	Herc Rentals Inc
Operator Phone:	239-301-1161
Owner Phone:	239-948-4515
Owner Mail Address:	27500 Riverview Center Blvd.
Owner State:	FL

HERC RENTALS INC (9646-00) (Continued) **A100420724**

Owner Zip Code:	34134
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAL000378832

C12 **WESTSIDE CEMETERY DISTRICT** **CA SWEEPS UST** **S106934412**
NW **26901 CEDAR ST** **N/A**
< 1/8 **TAFT, CA 93268**
0.122 mi.
642 ft. **Site 1 of 2 in cluster C**

Relative: **Higher**
Actual: **808 ft.**

SWEEPS UST:

Name:	WESTSIDE CEMETERY DISTRICT
Address:	26901 CEDAR ST
City:	TAFT
Status:	Active
Comp Number:	340001
Number:	9
Board Of Equalization:	Not reported
Referral Date:	08-29-90
Action Date:	08-29-90
Created Date:	08-29-90
Owner Tank Id:	Not reported
SWRCB Tank Id:	15-000-340001-000001
Tank Status:	A
Capacity:	1000
Active Date:	08-29-90
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	1

C13 **WEST SIDE CEMETERY DISTRICT** **CA UST** **U004112477**
NW **26910 CEDAR ST** **N/A**
1/8-1/4 **TAFT, CA**
0.127 mi.
673 ft. **Site 2 of 2 in cluster C**

Relative: **Higher**
Actual: **809 ft.**

KERN CO. UST:

Name:	WEST SIDE CEMETERY DISTRICT
Address:	26910 CEDAR ST
City:	TAFT
Region:	Kern
Facility ID:	Not reported
CERSID:	Not reported
Owner Id:	340001
Owner Name:	WEST SIDE CEMETERY DISTRICT
Tank Num:	1
Tank Capacity:	0

WEST SIDE CEMETERY DISTRICT (Continued) **U004112477**

Common Name:	Not reported
Description:	Not reported
Number of Compartments:	Not reported
Install Date:	Not reported
Date of Closure:	Not reported
Billing Status:	Not reported
Mailing Address:	Not reported
Mailing Address (care of):	Not reported
Mailing City/State/Zip:	Not reported

D14 **KINGS OIL TOOLS, TAFT YARD** **CA CERS HAZ WASTE** **S121779962**
South **803 BLACKGOLD CT** **CA CERS TANKS** **N/A**
1/8-1/4 **TAFT, CA 93268** **CA CERS**
0.164 mi.
868 ft. **Site 1 of 3 in cluster D**

Relative:
Lower

Actual:
728 ft.

CERS HAZ WASTE:

Name:	KINGS OIL TOOLS, TAFT YARD
Address:	803 BLACKGOLD CT
City,State,Zip:	TAFT, CA 93268
Site ID:	41791
CERS ID:	10599571
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	KINGS OIL TOOLS, TAFT YARD
Address:	803 BLACKGOLD CT
City,State,Zip:	TAFT, CA 93268
Site ID:	41791
CERS ID:	10599571
CERS Description:	Aboveground Petroleum Storage

CERS:

Name:	KINGS OIL TOOLS, TAFT YARD
Address:	803 BLACKGOLD CT
City,State,Zip:	TAFT, CA 93268
Site ID:	41791
CERS ID:	10599571
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	41791
Site Name:	Kings Oil Tools, Taft Yard
Violation Date:	04-24-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 05/07/2015. The facilities hazardous material/waste inventory was not accurate. Please include the following items on the California Environmental Reporting System (CERS). Gear Oil (75 gallons), Motor Oil (200 gallons), Used Oil Filters (165 gallons), and Argon (300 cf).
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS

KINGS OIL TOOLS, TAFT YARD (Continued) **S121779962**

Site ID:	41791
Site Name:	Kings Oil Tools, Taft Yard
Violation Date:	04-24-2015
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to properly close hazardous waste containers when not in active use.
Violation Notes:	Returned to compliance on 05/24/2015. During the course of the inspection, a hazardous waste drum was observed to have no container lid. Please keep all containers closed/sealed when not in active use. Corrected on site.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	41791
Site Name:	Kings Oil Tools, Taft Yard
Violation Date:	06-05-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to label stationary hazardous waste tanks as "hazardous waste" and mark with an accumulation start date.
Violation Notes:	ACCUMULATION DATES ON LABEL WERE NOT LEGIBLE. PLEASE MAINTAIN/REPLACE LABELS.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	41791
Site Name:	Kings Oil Tools, Taft Yard
Violation Date:	06-05-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to provide and maintain secondary containment for bulk storage tank installations (except for mobile refuelers and other non-transportation-related tank trucks) sufficient to hold the capacity of the largest container and sufficient freeboard for precipitation.
Violation Notes:	Returned to compliance on 07/27/2018. OBSERVED OIL WITHIN CATCH BASIN. PLEASE MAINTAIN AND CLEAN CATCH BASIN.
Violation Division:	Kern County Env Health Services Department
Violation Program:	APSA
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Kern County Env Health Services Department
Eval Program:	APSA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	Yes

KINGS OIL TOOLS, TAFT YARD (Continued) **S121779962**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-24-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-27-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 41791
Site Name: Kings Oil Tools, Taft Yard
Site Address: 803 BLACKGOLD CT
Site City: TAFT
Site Zip: 93268

KINGS OIL TOOLS, TAFT YARD (Continued) **S121779962**

Enf Action Date: 04-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Kern County Env Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 41791
Site Name: Kings Oil Tools, Taft Yard
Site Address: 803 BLACKGOLD CT
Site City: TAFT
Site Zip: 93268
Enf Action Date: 04-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Kern County Env Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2235 Spring Street
Affiliation City: Paso Robles
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93446
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Kings Oil Tools, Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: JIM ZABEN
Entity Title: Not reported
Affiliation Address: 2235 SPRING STREET
Affiliation City: Paso Robles
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93446
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Tom Fowler
Entity Title: Not reported
Affiliation Address: 2235 Spring Street
Affiliation City: Paso Robles

KINGS OIL TOOLS, TAFT YARD (Continued) **S121779962**

Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93446
Affiliation Phone:	(805) 238-9311
Affiliation Type Desc:	Operator
Entity Name:	Bill George
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(661) 201-5006
Affiliation Type Desc:	Property Owner
Entity Name:	Tom Fowler
Entity Title:	Not reported
Affiliation Address:	2235 Spring Street
Affiliation City:	Paso Robles
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93446
Affiliation Phone:	(805) 238-9311
Affiliation Type Desc:	Document Preparer
Entity Name:	Jim Zaben
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	JIM ZABEN
Entity Title:	ENVIRONMENTAL MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Kern County Environmental Health Services Departme
Entity Title:	Not reported
Affiliation Address:	2700 M Street, Suite 300
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740

D15 **KINGS OIL TOOLS** **RCRA NonGen / NLR** **1024846821**
South **803 BLACKGOLD CT** **CAL000401284**
1/8-1/4 **TAFT, CA 93268**
0.164 mi.
868 ft. **Site 2 of 3 in cluster D**

Relative:
Lower

Actual:
728 ft.

RCRA NonGen / NLR:

Date form received by agency:	10/15/2014
Facility name:	KINGS OIL TOOLS
Facility address:	803 BLACKGOLD CT TAFT, CA 93268
EPA ID:	CAL000401284
Mailing address:	2235 SPRING STREET PASO ROBLES, CA 93446-0000
Contact:	JIM ZABEN
Contact address:	2235 SPRING STREET PASO ROBLES, CA 93446
Contact country:	Not reported
Contact telephone:	661-979-3880
Contact email:	JZABEN@KINGSOILTOOLS.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	TOM FOWLER
Owner/operator address:	2235 SPRING STREET PASO ROBLES, CA 93446
Owner/operator country:	Not reported
Owner/operator telephone:	805-238-9311
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JIM ZABEN
Owner/operator address:	2235 SPRING STREET PASO ROBLES, CA 93446
Owner/operator country:	Not reported
Owner/operator telephone:	661-979-3880
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No

KINGS OIL TOOLS (Continued) **1024846821**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

D16 **KINGS OIL TOOLS, TAFT YARD** **CA AST** **A100421477**
South **803 BLACKGOLD CT** **N/A**
1/8-1/4 **TAFT, CA 93268**
0.164 mi.
868 ft. **Site 3 of 3 in cluster D**

Relative: AST:
Lower

Actual: Name:	KINGS OIL TOOLS, TAFT YARD
728 ft. Address:	803 BLACKGOLD CT
City/Zip:	TAFT,93268
Certified Unified Program Agencies:	Not reported
Owner:	Tom Fowler
Total Gallons:	Not reported
CERSID:	10599571
Facility ID:	Not reported
Business Name:	Kings Oil Tools, Inc
Phone:	6617454977
Fax:	Not reported
Mailing Address:	2235 Spring Street
Mailing Address City:	Paso Robles
Mailing Address State:	CA
Mailing Address Zip Code:	93446
Operator Name:	Bill George
Operator Phone:	661-201-5006
Owner Phone:	805-238-9311
Owner Mail Address:	2235 Spring Street
Owner State:	CA
Owner Zip Code:	93446
Owner Country:	United States
Property Owner Name:	Tom Fowler
Property Owner Phone:	805-238-9311
Property Owner Mailing Address:	2235 Spring Street
Property Owner City:	Paso Robles
Property Owner Stat :	CA
Property Owner Zip Code:	93446
Property Owner Country:	United States
EPAID:	CAL000401284

17
WNW
1/4-1/2
0.293 mi.
1546 ft.

ASH STREET / TAFT #2 BURN DUMP
300 FT FR MARY ST
TAFT, CA 93268

CA SWF/LF **S102360465**
CA CERS **N/A**

Relative:
Higher

Actual:
791 ft.

SWF/LF (SWIS):

Name:	ASH STREET BURN DUMP
Address:	300 FT FR MARY ST/OFF ASHST-T32S,R24ES17
City,State,Zip:	TAFT, CA
Facility ID:	15-CR-0060
Lat/Long:	35.15212 / -119.43668
Owner Name:	Kern County Public Works Department
Owner Telephone:	6618628900
Owner Address:	Not reported
Owner Address2:	2700 "M" St., Suite 450
Owner City,St,Zip:	Bakersfield, CA 93301
Operational Status:	Closed
Operator:	Kern County Public Works Department
Operator Phone:	6618628900
Operator Address:	Not reported
Operator Address2:	2700 "M" St., Suite 450
Operator City,St,Zip:	Bakersfield, CA 93301
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	$0.00
Activity:	Solid Waste Disposal Site
Regulation Status:	Pre-regulations
Landuse Name:	Not reported
GIS Source:	GPS
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Quarterly
Accepted Waste:	Not reported
Closure Date:	12/31/1955
Closure Type:	Estimated
Disposal Acreage:	$10.00
SWIS Num:	15-CR-0060
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported
Lat/Long:	35.15212 / -119.43668

CERS:

Name:	ASH STREET / TAFT #2 BURN DUMP
Address:	300 FT FR MARY ST
City,State,Zip:	TAFT, CA 93268
Site ID:	452456
CERS ID:	110013996827
CERS Description:	US EPA Air Emission Inventory System (EIS)

Name:	ASH STREET BURN DUMP
Address:	300 FT FR MARY ST/OFF ASHST-T32S,R24ES17
City,State,Zip:	TAFT, CA
Site ID:	506816

ASH STREET / TAFT #2 BURN DUMP (Continued) **S102360465**

CERS ID: 15-CR-0060
CERS Description: Solid Waste and Recycle Sites

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Kern County Public Works Department
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Bakersfield
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93301
Affiliation Phone: 6618628900

Affiliation Type Desc: Legal Operator
Entity Name: Kern County Public Works Department
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Bakersfield
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93301
Affiliation Phone: 6618628900

18
NE
1/4-1/2
0.372 mi.
1965 ft.

SECTION 8 CENTRAL SWDS **CA SWF/LF** **S102360467**
1.7 MI E-NE/O FORD CITY **CA CERS** **N/A**
FORD CITY, CA 93268

Relative:
Higher

Actual:
892 ft.

SWF/LF (SWIS):
Name: SECTION 8 CENTRAL SWDS
Address: 1.7 MI E-NE/O FORD CITY
City,State,Zip: FORD CITY, CA
Facility ID: 15-CR-0062
Lat/Long: 35.15538 / -119.41594
Owner Name: Texaco Exploratn & Productn Inc-Fellows
Owner Telephone: Not reported
Owner Address: Not reported
Owner Address2: 26251 Hwy 32
Owner City,St,Zip: Fellows, CA 93224
Operational Status: Closed
Operator: Not reported
Operator Phone: Not reported
Operator Address: Not reported
Operator Address2: Not reported
Operator City,St,Zip: Not reported
Permit Date: Not reported
Permit Status: Not reported
Permitted Acreage: $0.00
Activity: Solid Waste Disposal Site
Regulation Status: Unpermitted
Landuse Name: Not reported
GIS Source: GPS
Category: Disposal
Unit Number: 01
Inspection Frequency: Annual

SECTION 8 CENTRAL SWDS (Continued) **S102360467**

Accepted Waste: Not reported
Closure Date: 12/31/1975
Closure Type: Estimated
Disposal Acreage: $2.00
SWIS Num: 15-CR-0062
Waste Discharge Requirement Num: Not reported
Program Type: Not reported
Permitted Throughput with Units: Not reported
Actual Throughput with Units: Not reported
Permitted Capacity with Units: Not reported
Remaining Capacity: Not reported
Remaining Capacity with Units: Not reported
Lat/Long: 35.15538 / -119.41594

CERS:
Name: SECTION 8 CENTRAL SWDS
Address: 1.7 MI E-NE/O FORD CITY
City,State,Zip: FORD CITY, CA
Site ID: 511744
CERS ID: 15-CR-0062
CERS Description: Solid Waste and Recycle Sites

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Texaco Exploratn & Productn Inc-Fellows
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Fellows
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93224
Affiliation Phone: Not reported

Name: SECTION 8 CENTRAL SWDS
Address: 1.7 MI E-NE/O FORD CITY
City,State,Zip: FORD CITY, CA 93268
Site ID: 493264
CERS ID: 110013996872
CERS Description: US EPA Air Emission Inventory System (EIS)

19
SW
1/4-1/2
0.386 mi.
2040 ft.

CHEVRON #2 BURN DUMP **CA SWF/LF** **S106079121**
T32S, R24E, SECT 17,N/O GARDNER FIELD RD **CA CERS** **N/A**
TAFT, CA

Relative:
Lower

Actual:
753 ft.

SWF/LF (SWIS):
Name: CHEVRON #2 BURN DUMP
Address: T32S, R24E, SECT 17,N/O GARDNER FIELD RD
City,State,Zip: TAFT, CA
Facility ID: 15-CR-0078
Lat/Long: 35.1447 / -119.4297
Owner Name: Chevron USA-Taft
Owner Telephone: 8057632154
Owner Address: Not reported
Owner Address2: 4300 Midway Rd
Owner City,St,Zip: Taft, CA 93268

CHEVRON #2 BURN DUMP (Continued) **S106079121**

Operational Status:	Closed
Operator:	City Of Sanger Public Works, 17th St
Operator Phone:	2098756513
Operator Address:	Not reported
Operator Address2:	1700 Seventeenth St
Operator City,St,Zip:	Sanger, CA 93657
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	$0.00
Activity:	Solid Waste Disposal Site
Regulation Status:	Pre-regulations
Landuse Name:	Not reported
GIS Source:	GPS
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Annual
Accepted Waste:	Not reported
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	$0.00
SWIS Num:	15-CR-0078
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported
Lat/Long:	35.1447 / -119.4297

CERS:

Name:	CHEVRON #2 BURN DUMP
Address:	T32S, R24E, SECT 17,N/O GARDNER FIELD RD
City,State,Zip:	TAFT, CA
Site ID:	507683
CERS ID:	15-CR-0078
CERS Description:	Solid Waste and Recycle Sites

Affiliation:

Affiliation Type Desc:	Legal Operator
Entity Name:	City Of Sanger Public Works, 17th St
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Sanger
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93657
Affiliation Phone:	2098756513

Affiliation Type Desc:	Legal Owner
Entity Name:	Chevron USA-Taft
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Taft
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93268

CHEVRON #2 BURN DUMP (Continued) **S106079121**

Affiliation Phone: 8057632154

E20
South
1/4-1/2
0.409 mi.
2161 ft.

Relative:
Lower

Actual:
717 ft.

CA WASTEWATER PITS **S122501440**
N/A

KERN (County), CA

Site 1 of 3 in cluster E

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14140
Longitude:	-119.42402

E21
South
1/4-1/2
0.409 mi.
2162 ft.

Relative:
Lower

Actual:
720 ft.

CA WASTEWATER PITS **S122501439**
N/A

KERN (County), CA

Site 2 of 3 in cluster E

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14145
Longitude:	-119.42442

F22 **CA WASTEWATER PITS** **S122501437**
South **N/A**
1/4-1/2 **KERN (County), CA**
0.411 mi.
2170 ft. **Site 1 of 2 in cluster F**

Relative: **Lower**

Actual: **724 ft.**

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14154
Longitude:	-119.42503

E23 **CA WASTEWATER PITS** **S122501441**
South **N/A**
1/4-1/2 **KERN (County), CA**
0.412 mi.
2175 ft. **Site 3 of 3 in cluster E**

Relative: **Lower**

Actual: **715 ft.**

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14133
Longitude:	-119.42363

G24 **CA WASTEWATER PITS** **S122501442**
South **N/A**
1/4-1/2 **KERN (County), CA**
0.417 mi.
2202 ft. **Site 1 of 2 in cluster G**

Relative: **Lower**

Actual: **711 ft.**

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S

(Continued) **S122501442**

Range: 24E
BM: MD
Latitude: 35.14124
Longitude: -119.42303

F25 **CA WASTEWATER PITS** **S122501436**
SSW **N/A**
1/4-1/2 **KERN (County), CA**
0.418 mi.
2208 ft. **Site 2 of 2 in cluster F**

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
728 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14166
Longitude: -119.42586

H26 **CA WASTEWATER PITS** **S122501435**
SSW **N/A**
1/4-1/2 **KERN (County), CA**
0.429 mi.
2266 ft. **Site 1 of 2 in cluster H**

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
731 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14178
Longitude: -119.42663

G27 **CA WASTEWATER PITS** **S122501443**
South **N/A**
1/4-1/2 **KERN (County), CA**
0.439 mi.
2316 ft. **Site 2 of 2 in cluster G**

Relative: WASTEWATER PITS:
Lower

Actual: Name:	Not reported
708 ft. Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14093
Longitude:	-119.42242

H28 **CA WASTEWATER PITS** **S122501434**
SSW **N/A**
1/4-1/2 **KERN (County), CA**
0.441 mi.
2327 ft. **Site 2 of 2 in cluster H**

Relative: WASTEWATER PITS:
Lower

Actual: Name:	Not reported
732 ft. Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14190
Longitude:	-119.42729

I29 **CA WASTEWATER PITS** **S122501433**
SSW **N/A**
1/4-1/2 **KERN (County), CA**
0.451 mi.
2379 ft. **Site 1 of 5 in cluster I**

Relative: WASTEWATER PITS:
Lower

Actual: Name:	Not reported
734 ft. Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S

(Continued) **S122501433**

Range: 24E
BM: MD
Latitude: 35.14196
Longitude: -119.42771

J30 **CA WASTEWATER PITS** **S122501444**
South **N/A**
1/4-1/2
0.466 mi.
2458 ft. **KERN (County), CA**

Site 1 of 2 in cluster J

Relative: **Lower**

Actual: **705 ft.**

WASTEWATER PITS:
Name: Not reported
Address: Not reported
City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14054
Longitude: -119.42178

I31 **CA WASTEWATER PITS** **S122501432**
SSW **N/A**
1/4-1/2
0.466 mi.
2458 ft. **KERN (County), CA**

Site 2 of 5 in cluster I

Relative: **Lower**

Actual: **737 ft.**

WASTEWATER PITS:
Name: Not reported
Address: Not reported
City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14188
Longitude: -119.42803

I32
SSW
1/4-1/2
0.472 mi.
2491 ft.

Relative:
Lower

Actual:
738 ft.

CA WASTEWATER PITS **S122501431**
N/A

KERN (County), CA

Site 3 of 5 in cluster I

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14196
Longitude:	-119.42833

I33
SSW
1/4-1/2
0.483 mi.
2550 ft.

Relative:
Lower

Actual:
740 ft.

CA WASTEWATER PITS **S122501428**
N/A

KERN (County), CA

Site 4 of 5 in cluster I

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14175
Longitude:	-119.42833

I34
SSW
1/4-1/2
0.484 mi.
2554 ft.

Relative:
Lower

Actual:
740 ft.

CA WASTEWATER PITS **S122501430**
N/A

KERN (County), CA

Site 5 of 5 in cluster I

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S

(Continued) **S122501430**

Range: 24E
BM: MD
Latitude: 35.14196
Longitude: -119.42866

K35 **CA WASTEWATER PITS** **S122501426**
SSW **N/A**
1/4-1/2 **KERN (County), CA**
0.493 mi.
2604 ft. **Site 1 of 2 in cluster K**

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
741 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14178
Longitude: -119.42866

L36 **CA WASTEWATER PITS** **S122501453**
South **N/A**
1/4-1/2 **KERN (County), CA**
0.496 mi.
2617 ft. **Site 1 of 2 in cluster L**

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
714 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14010
Longitude: -119.42297

J37
South
1/4-1/2
0.496 mi.
2618 ft.

CA WASTEWATER PITS **S122501454**
N/A

KERN (County), CA

Site 2 of 2 in cluster J

Relative:
Lower

Actual:
711 ft.

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14010
Longitude:	-119.42246

38
SSE
1/4-1/2
0.496 mi.
2619 ft.

CA WASTEWATER PITS **S122501456**
N/A

KERN (County), CA

Relative:
Lower

Actual:
704 ft.

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S
Range:	24E
BM:	MD
Latitude:	35.14010
Longitude:	-119.42098

K39
SSW
1/4-1/2
0.496 mi.
2621 ft.

CA WASTEWATER PITS **S122501429**
N/A

KERN (County), CA

Site 2 of 2 in cluster K

Relative:
Lower

Actual:
744 ft.

WASTEWATER PITS:

Name:	Not reported
Address:	Not reported
City,State,Zip:	CA
Status:	Active
Field:	Midway-Sunset
Lease:	SE Taft (New)
Operator:	Valley Water Management Company
Section Number:	17
Township:	32S

(Continued) **S122501429**

Range: 24E
BM: MD
Latitude: 35.14196
Longitude: -119.42900

L40 **CA WASTEWATER PITS** **S122501452**
South **N/A**
1/4-1/2
0.497 mi.
2622 ft. **KERN (County), CA**

Site 2 of 2 in cluster L

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
717 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14010
Longitude: -119.42367

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41 **CA WASTEWATER PITS** **S122501451**
South **N/A**
1/4-1/2
0.498 mi.
2632 ft. **KERN (County), CA**

Relative: WASTEWATER PITS:
Lower
Name: Not reported
Actual: Address: Not reported
720 ft. City,State,Zip: CA
Status: Active
Field: Midway-Sunset
Lease: SE Taft (New)
Operator: Valley Water Management Company
Section Number: 17
Township: 32S
Range: 24E
BM: MD
Latitude: 35.14010
Longitude: -119.42404

M42 **LAIDLAW ENVIRONMENTAL SERVICES** **CA ENVIROSTOR** **S109283141**
SE **7004 GAS COMPANY RD** **CA EMI** **N/A**
1/2-1 **TAFT, CA 93268** **CA CERS**
0.775 mi.
4091 ft. **Site 1 of 3 in cluster M**

Relative:
Lower

Actual:
683 ft.

ENVIROSTOR:

Name:	LAIDLAW ENVIRONMENTAL SERVICES
Address:	7004 GAS COMPANY RD
City,State,Zip:	TAFT, CA 932680000
Facility ID:	80001708
Status:	Active
Status Date:	04/06/2012
Site Code:	551291
Site Type:	Corrective Action
Site Type Detailed:	Corrective Action
Acres:	10
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	WM
Program Manager:	Jose Luevano
Supervisor:	Jose Salcedo
Division Branch:	Northern California Schools & Santa Susana
Assembly:	34
Senate:	16
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	35.13844
Longitude:	-119.4131
APN:	22004070
Past Use:	TRANSFER STATION, HAZARDOUS WASTE HAULER, HAZARDOUS WASTE STORAGE - TANKS/CONTAINERS, HAZARDOUS WASTE TREATMENT
Potential COC:	Under Investigation Benzotrichloride Cyanide (free Cyanide (hydrogen Pyridine
Confirmed COC:	30077-NO 30506-NO 30160-NO 30161-NO Under Investigation
Potential Description:	OTH, SOIL, SV, UE
Alias Name:	GSX Service of California, Inc.
Alias Type:	Alternate Name
Alias Name:	Industrial Technologies, Inc. (IT Corporation)
Alias Type:	Alternate Name
Alias Name:	Kern County Mosquito Abaitment District
Alias Type:	Alternate Name
Alias Name:	Laidlaw Environmental Services, Inc.
Alias Type:	Alternate Name
Alias Name:	West Side Mosquito and Vector Control District
Alias Type:	Alternate Name
Alias Name:	22004070
Alias Type:	APN
Alias Name:	CAD089864805
Alias Type:	EPA Identification Number
Alias Name:	551291
Alias Type:	Project Code (Site Code)
Alias Name:	80001708
Alias Type:	Envirostor ID Number
Alias Name:	http://www.co.kern.ca.us/clerk/boards/West-mos.asp
Alias Type:	External Website Link / URL

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	06/05/2012
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Report
Completed Date:	08/15/1991
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	05/10/2012
Comments:	Complete

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	08/07/2012
Comments:	May 1991 Taft Facility Certification Closure Report uploaded into Envirstor.

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

EMI:

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2006
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.0093205199470197073
Reactive Organic Gases Tons/Yr:	.00927437540483476
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 91977
Year:	2007
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.0094478547580145864
Reactive Organic Gases Tons/Yr:	.009401079799652112
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2008
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.0104212080306810651
Reactive Organic Gases Tons/Yr:	.010369614141464226
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2009
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	9.4551126062904101E-3
Reactive Organic Gases Tons/Yr:	9.4083017153739797E-3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Year: 2010
County Code: 15
Air Basin: SJV
Facility ID: 1818
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 9.8015268342929208E-3
Reactive Organic Gases Tons/Yr: 9.7529999999999995E-3
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Year: 2011
County Code: 15
Air Basin: SJV
Facility ID: 1818
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.0070053997379
Reactive Organic Gases Tons/Yr: 0.00697071702
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Year: 2012
County Code: 15
Air Basin: SJV
Facility ID: 1818
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.0070053997379
Reactive Organic Gases Tons/Yr: 0.00697071702

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2013
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.007482
Reactive Organic Gases Tons/Yr:	0.007482
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2014
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.0055424822392
Reactive Organic Gases Tons/Yr:	0.0055424822392
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	WESTSIDE MOSQUITO ABATEMENT D
Address:	7004 GAS CO RD
City,State,Zip:	TAFT, CA 93268
Year:	2015
County Code:	15
Air Basin:	SJV
Facility ID:	1818
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System:	Not reported

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.005493
Reactive Organic Gases Tons/Yr: 0.005493
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Year: 2016
County Code: 15
Air Basin: SJV
Facility ID: 1818
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.004831
Reactive Organic Gases Tons/Yr: 0.004831
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr: Not reported

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Year: 2017
County Code: 15
Air Basin: SJV
Facility ID: 1818
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.0061999
Reactive Organic Gases Tons/Yr: 0.0061999
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr: Not reported

CERS:
Name: LAIDLAW ENVIRONMENTAL SERVICES
Address: 7004 GAS COMPANY RD
City,State,Zip: TAFT, CA 932680000
Site ID: 197287
CERS ID: CAD089864805
CERS Description: Hazardous Waste

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **S109283141**

Name: WESTSIDE MOSQUITO ABATEMENT D
Address: 7004 GAS CO RD
City,State,Zip: TAFT, CA 93268
Site ID: 505033
CERS ID: 110054201074
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: MARGY TIMS
Entity Title: Not reported
Affiliation Address: POBOX 205
Affiliation City: TAFT
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

M43 **LAIDLAW ENVIRONMENTAL SERVICES** **CA HIST UST** **1000419555**
SE **7004 GAS COMPANY RD** **CA HWP** **N/A**
1/2-1 **TAFT, CA 93268**
0.775 mi.
4091 ft. **Site 2 of 3 in cluster M**

Relative:
Lower

Actual:
683 ft.

HIST UST:
Name: IT TRANSPORTATION TAFT FACILIT
Address: 7004 GAS COMPANY RD
City,State,Zip: TAFT, CA 93268
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000019619
Facility Type: Other
Other Type: OIL FIELD SERVICES
Contact Name: RICHARD SOLF
Telephone: 8057634171
Owner Name: IT CORPORATION
Owner Address: 23456 HAWTHORNE BLVD.
Owner City,St,Zip: TORRANCE, CA 90505
Total Tanks: 0005

Tank Num: 001
Container Num: TANK1
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Pressure Test

Tank Num: 002
Container Num: TANK2
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **1000419555**

Leak Detection: Pressure Test

Tank Num: 003
Container Num: SUMP1
Year Installed: 1979
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 4
Leak Detection: None

Tank Num: 004
Container Num: CELL#2
Year Installed: 1983
Tank Capacity: 00000800
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 6
Leak Detection: Not reported

Tank Num: 005
Container Num: CELL #1
Year Installed: 1983
Tank Capacity: 00000400
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 6
Leak Detection: Visual

HWP:
Name: LAIDLAW ENVIRONMENTAL SERVICES
Address: 7004 GAS COMPANY RD
City,State,Zip: TAFT, CA 932680000
EPA Id: CAD089864805
Cleanup Status: CLOSED
Latitude: 35.13844
Longitude: -119.4131
Facility Type: Historical - Non-Operating
Facility Size: Not reported
Team: Not reported
Supervisor: Not reported
Site Code: Not reported
Assembly District: 34
Senate District: 16
Public Information Officer: Not reported
Public Information Officer: Not reported

Activities:
EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - CALL-IN LETTER ISSUED
Actual Date: 02/07/1983

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1

LAIDLAW ENVIRONMENTAL SERVICES (Continued) **1000419555**

Event Description: New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date: 09/11/1983

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date: 03/01/1990

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - PERMIT TERMINATED - TERMINATION RECEIVED
Actual Date: 05/01/1990

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - PERMIT TERMINATED - TERMINATION APPROVED
Actual Date: 06/28/1991

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 03/01/1985

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - APPLICATION PART B RECEIVED
Actual Date: 03/31/1983

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: New Operating Permit - APPLICATION PART A RECEIVED
Actual Date: 11/19/1980

Closure:
EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: Closure Final - RECEIVE CLOSURE CERTIFICATION
Actual Date: 05/16/1991

EPA Id: CAD089864805
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1, TANKTRT1
Event Description: Closure Final - ISSUE CLOSURE VERIFICATION
Actual Date: 06/28/1991

M44 **G S X SERVICES OF CAL INC TAFT FAC** **SEMS-ARCHIVE** **1000455667**
SE **7004 GAS COMPANY RD** **CORRACTS** **CAD089864805**
1/2-1 **TAFT, CA 93268** **RCRA-TSDF**
0.775 mi. **RCRA-SQG**
4091 ft. **Site 3 of 3 in cluster M** **FINDS**
ECHO
Relative: **NY MANIFEST**
Lower

Actual: **683 ft.**

SEMS Archive:

Site ID:	0903317
EPA ID:	CAD089864805
Cong District:	20
FIPS Code:	06029
FF:	N
NPL:	Not on the NPL
Non NPL Status:	Deferred to RCRA (Subtitle C)

SEMS Archive Detail:

Region:	09
Site ID:	0903317
EPA ID:	CAD089864805
Site Name:	IT TRANSPORTATION CORP TAFT FACILITY
NPL:	N
FF:	N
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1991-03-01 05:00:00
Finish Date:	1991-03-01 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf

Region:	09
Site ID:	0903317
EPA ID:	CAD089864805
Site Name:	IT TRANSPORTATION CORP TAFT FACILITY
NPL:	N
FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1996-01-23 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse

Region:	09
Site ID:	0903317
EPA ID:	CAD089864805
Site Name:	IT TRANSPORTATION CORP TAFT FACILITY
NPL:	N
FF:	N
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	1991-08-29 04:00:00

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Qual: D
Current Action Lead: EPA Perf

CORRACTS:
EPA ID: CAD089864805
EPA Region: 09
Area Name: ENTIRE FACILITY
Actual Date: 19910815
Action: CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
NAICS Code(s): 213112 48411
Support Activities for Oil and Gas Operations
General Freight Trucking, Local
Original schedule date: Not reported
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 09/01/1996
Facility name: G S X SERVICES OF CAL INC TAFT FAC
Facility address: 7004 GAS COMPANY RD
TAFT, CA 93268
EPA ID: CAD089864805
Mailing address: 121 EXECUTIVE CTR SR STE 100
COLUMBIA, CA 29221
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: GSX SERVICES OF CALIFORNIA
Owner/operator address: 121 EXECUTIVE CTR DR STE 100
COLUMBIA, SC 29210
Owner/operator country: Not reported
Owner/operator telephone: 213-830-1781
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: IT TRANSPORTATION CORP TAFT FACILITY
Owner/operator address: 336 W ANAHEIM ST
WILMINGTON, CA 90744
Owner/operator country: Not reported
Owner/operator telephone: 213-830-1781

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

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

Historical Generators:
Date form received by agency: 04/26/1990
Site name: GSX SERVICES OF CALIF TRANSPORT TAFT
Classification: Large Quantity Generator

Date form received by agency: 07/26/1989
Site name: G S X SERVICES OF CAL INC TAFT FAC
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 01/01/1990
Event: LEAD AGENCY DETERMINATION

Event date: 08/15/1991
Event: NCAPS RANKING/PRIORITY

Event date: 08/15/1991
Event: CA PRIORITIZATION-LOW CA PRIORITY

Event date: 08/15/1991
Event: PA OR CERCLA INSPECTION

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/09/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Evaluation date: 04/18/1991
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/29/1990
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/28/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/21/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/25/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: G S X SERVICES OF CAL INC TAFT FAC
Facility address: 7004 GAS COMPANY RD
TAFT, CA 93268
EPA ID: CAD089864805
Mailing address: 121 EXECUTIVE CTR SR STE 100
COLUMBIA, CA 29221
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: GSX SERVICES OF CALIFORNIA
Owner/operator address: 121 EXECUTIVE CTR DR STE 100
COLUMBIA, SC 29210
Owner/operator country: Not reported
Owner/operator telephone: 213-830-1781
Owner/operator email: Not reported

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: IT TRANSPORTATION CORP TAFT FACILITY
Owner/operator address: 336 W ANAHEIM ST
WILMINGTON, CA 90744
Owner/operator country: Not reported
Owner/operator telephone: 213-830-1781
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

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

Historical Generators:
Date form received by agency: 04/26/1990
Site name: GSX SERVICES OF CALIF TRANSPORT TAFT
Classification: Large Quantity Generator

Date form received by agency: 07/26/1989
Site name: G S X SERVICES OF CAL INC TAFT FAC
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 01/01/1990
Event: LEAD AGENCY DETERMINATION

Event date: 08/15/1991
Event: NCAPS RANKING/PRIORITY

Event date: 08/15/1991
Event: CA PRIORITIZATION-LOW CA PRIORITY

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Event date: 08/15/1991
Event: PA OR CERCLA INSPECTION

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/09/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/18/1991
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/29/1990
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/28/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/21/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/25/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110002663127

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

ECHO:
- Envid: 1000455667
- Registry ID: 110002663127
- DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002663127

NY MANIFEST:
- Name: IT CORPORATION
- Address: 7004 GAS COMPANY RD
- City,State,Zip: TAFT, CA 93268
- Country: USA
- EPA ID: CAD089864805
- Facility Status: Not reported
- Location Address 1: 7004 GAS COMPANY ROAD-ROUTE 1
- Code: BP
- Location Address 2: Not reported
- Total Tanks: Not reported
- Location City: BOX 25 TAFT
- Location State: CA
- Location Zip: 93268
- Location Zip 4: Not reported

NY MANIFEST:
- EPAID: CAD089864805
- Mailing Name: IT CORPORATION
- Mailing Contact: IT CORPORATION
- Mailing Address 1: 7004 GAS COMPANY ROAD-ROUTE 1
- Mailing Address 2: Not reported
- Mailing City: BOX 25 TAFT
- Mailing State: CA
- Mailing Zip: 93268
- Mailing Zip 4: Not reported
- Mailing Country: USA
- Mailing Phone: 8057634171

NY MANIFEST:
- Document ID: NYA7891668
- Manifest Status: K
- seq: Not reported
- Year: 1989
- Trans1 State ID: 000000000
- Trans2 State ID: 000000000
- Generator Ship Date: 07/14/1989
- Trans1 Recv Date: 07/14/1989
- Trans2 Recv Date: / /
- TSD Site Recv Date: 08/01/1989
- Part A Recv Date: 08/28/1989
- Part B Recv Date: 08/08/1989
- Generator EPA ID: CAD089864805
- Trans1 EPA ID: NYD980769947
- Trans2 EPA ID: Not reported
- TSDF ID 1: NYD000632372
- TSDF ID 2: Not reported
- Manifest Tracking Number: Not reported
- Import Indicator: Not reported
- Export Indicator: Not reported
- Discr Quantity Indicator: Not reported

G S X SERVICES OF CAL INC TAFT FAC (Continued) **1000455667**

Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00040
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TAFT	1023295819	SO CAL GAS CO - TAFT REPEATER	E OF AIRPORT RD	93268	FINDS
TAFT	1005932746	TEXACO-BUENA VISTA HILLS GAS	1/4 M SW OF INTER OF AIRPORT D	93268	TSCA

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

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

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/03/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

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

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

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

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

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

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

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

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/13/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 14

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

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

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/13/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/13/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
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: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 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

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/23/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 08/26/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 41

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 42

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
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: 09/12/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/05/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/23/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/03/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 57
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
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: 08/02/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

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: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/28/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 26

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/11/2018
Number of Days to Update: 29

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

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: 06/05/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/30/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 58

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/23/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
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: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/16/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/09/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 106

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

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

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 09/05/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 18

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
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: 07/03/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/20/2019
Date Data Arrived at EDR: 06/20/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 49

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/06/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/03/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/09/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
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: 04/01/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 100

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 30

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/30/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 71

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/27/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/30/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/30/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/27/2019
Date Data Arrived at EDR: 03/28/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 34

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/10/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 06/05/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 90

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/07/2019
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 57

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/15/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 04/18/2019
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 11

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/19/2019
Date Data Arrived at EDR: 03/22/2019
Date Made Active in Reports: 04/09/2019
Number of Days to Update: 18

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 55

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/18/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/22/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 66

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/18/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/16/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 63

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

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

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/09/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 65
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/17/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 66
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/13/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/13/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 66
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/18/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 65
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
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: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 70

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 26

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/23/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 05/17/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/22/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 56

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 29

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 06/05/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 47

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/11/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/10/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 72

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/19/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/17/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 13

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 05/30/2019
Date Data Arrived at EDR: 05/31/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 53

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/22/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 09/12/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/09/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/15/2019
Date Data Arrived at EDR: 07/17/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 71

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/17/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/27/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/27/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/15/2019
Date Data Arrived at EDR: 07/17/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 19

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/04/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/28/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 67

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 53

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/23/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 53

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/25/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 09/30/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 9

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/02/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/12/2019
Number of Days to Update: 69

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 55

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 09/13/2019
Number of Days to Update: 77

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/16/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/31/2019
Date Data Arrived at EDR: 05/31/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 52

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/11/2019
Next Scheduled EDR Contact: 12/29/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 08/06/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 1

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 56

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/19/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 60

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 47

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 06/18/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 29

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2019
Date Data Arrived at EDR: 07/02/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 80

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 07/18/2019
Date Data Arrived at EDR: 07/18/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 49

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/09/2019
Date Data Arrived at EDR: 05/10/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 68

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 42
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/26/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/31/2019
Number of Days to Update: 33
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/14/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 83
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/16/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/06/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

GAS COMPANY ROAD
GAS COMPANY ROAD
TAFT, CA 93268

TARGET PROPERTY COORDINATES

Latitude (North):	35.149926 - 35° 8' 59.73''
Longitude (West):	119.423751 - 119° 25' 25.50''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	279205.4
UTM Y (Meters):	3892161.0
Elevation:	772 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5639118 TAFT, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

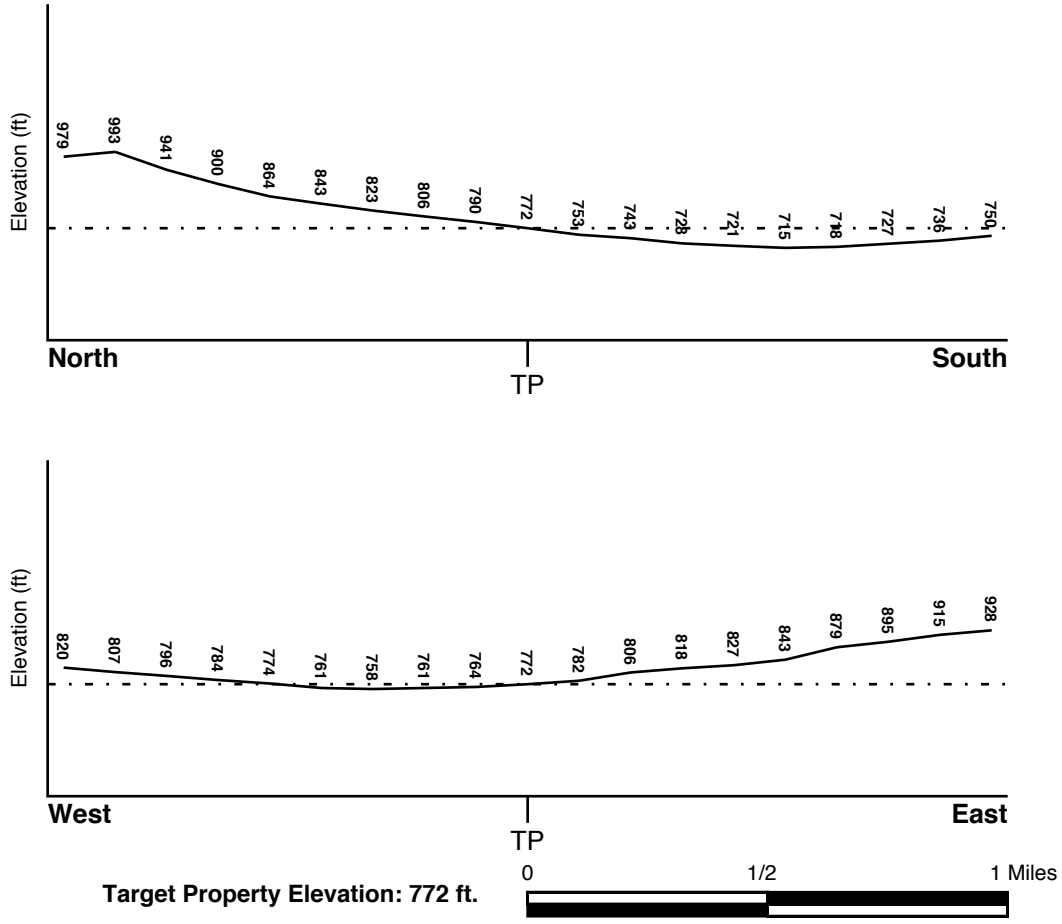
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 772 ft.

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
06029C2643E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06029C2650E	FEMA FIRM Flood data
06029C2639E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
TAFT	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site--specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	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).

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. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	KIMBERLINA
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. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	9 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 8.40 Min: 6.60
2	9 inches	45 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 8.40 Min: 7.90
3	45 inches	71 inches	stratified	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 8.40 Min: 7.90

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam
clay
clay loam
loamy sand
gravelly - sandy loam

Surficial Soil Types: sandy loam
clay
clay loam
loamy sand
gravelly - sandy loam

Shallow Soil Types: loam
sand
loamy sand

Deeper Soil Types: clay

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

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
No Wells Found		

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CAOG13000056241	0 - 1/8 Mile SE
2	CAOG13000056228	0 - 1/8 Mile NE
3	CAOG13000056229	0 - 1/8 Mile NW
A4	CAOG13000056256	1/8 - 1/4 Mile ESE
5	CAOG13000056240	1/8 - 1/4 Mile ESE
6	CAOG13000056242	1/8 - 1/4 Mile SSW
7	CAOG13000056231	1/8 - 1/4 Mile WSW
8	CAOG13000056227	1/8 - 1/4 Mile ENE
9	CAOG13000056230	1/8 - 1/4 Mile WNW
10	CAOG13000057569	1/8 - 1/4 Mile NNE
11	CAOG13000057290	1/8 - 1/4 Mile NNW
12	CAOG13000057523	1/8 - 1/4 Mile NE
13	CAOG13000057280	1/8 - 1/4 Mile NW
14	CAOG13000056232	1/8 - 1/4 Mile SW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
15	CAOG13000056244	1/8 - 1/4 Mile South
B16	CAOG13000056254	1/4 - 1/2 Mile ENE
17	CAOG13000056239	1/4 - 1/2 Mile East
B18	CAOG13000056226	1/4 - 1/2 Mile East
19	CAOG13000056243	1/4 - 1/2 Mile SSW
20	CAOG13000057289	1/4 - 1/2 Mile NNW
21	CAOG13000056245	1/4 - 1/2 Mile SSE
22	CAOG13000056217	1/4 - 1/2 Mile West
23	CAOG13000056216	1/4 - 1/2 Mile West
24	CAOG13000057514	1/4 - 1/2 Mile North
25	CAOG13000057533	1/4 - 1/2 Mile ENE
C26	CAOG13000057271	1/4 - 1/2 Mile WNW
27	CAOG13000057522	1/4 - 1/2 Mile NNE
28	CAOG13000057568	1/4 - 1/2 Mile NNW
C29	CAOG13000057557	1/4 - 1/2 Mile WNW
C30	CAOG13000057570	1/4 - 1/2 Mile WNW
D31	CAOG13000055083	1/4 - 1/2 Mile East
D32	CAOG13000056253	1/4 - 1/2 Mile East
D33	CAOG13000056238	1/4 - 1/2 Mile East
34	CAOG13000056255	1/4 - 1/2 Mile East
D35	CAOG13000056225	1/4 - 1/2 Mile East
36	CAOG13000056246	1/4 - 1/2 Mile SSE
E37	CAOG13000057270	1/4 - 1/2 Mile NW
F38	CAOG13000057532	1/4 - 1/2 Mile NE
E39	CAOG13000057269	1/4 - 1/2 Mile NW
F40	CAOG13000057565	1/4 - 1/2 Mile NE
41	CAOG13000057513	1/4 - 1/2 Mile North
G42	CAOG13000055081	1/4 - 1/2 Mile West
G43	CAOG13000056257	1/4 - 1/2 Mile West
H44	CAOG13000057567	1/4 - 1/2 Mile ENE
45	CAOG13000056248	1/4 - 1/2 Mile ESE
H46	CAOG13000057539	1/4 - 1/2 Mile ENE
I48	CAOG13000057521	1/4 - 1/2 Mile NNE
I47	CAOG13000057288	1/4 - 1/2 Mile NNE
49	CAOG13000057279	1/4 - 1/2 Mile NNW
50	CAOG13000056247	1/4 - 1/2 Mile SE
51	CAOG13000056728	1/4 - 1/2 Mile WNW
I52	CAOG13000057738	1/4 - 1/2 Mile NNE
53	CAOG13000056249	1/4 - 1/2 Mile SE
54	CAOG13000057531	1/4 - 1/2 Mile NE
J55	CAOG13000057538	1/4 - 1/2 Mile NE
56	CAOG13000057268	1/4 - 1/2 Mile NW
J57	CAOG13000057566	1/4 - 1/2 Mile NE
K58	CAOG13000056729	1/4 - 1/2 Mile NW
L59	CAOG13000056237	1/4 - 1/2 Mile East
L60	CAOG13000056224	1/4 - 1/2 Mile East
M61	CAOG13000057278	1/2 - 1 Mile NNW
N62	CAOG13000057484	1/2 - 1 Mile NNE
O63	CAOG13000057512	1/2 - 1 Mile North
64	CAOG13000056236	1/2 - 1 Mile ESE
65	CAOG13000057547	1/2 - 1 Mile ENE
P66	CAOG13000057287	1/2 - 1 Mile North
P67	CAOG13000054955	1/2 - 1 Mile North
K68	CAOG13000056782	1/2 - 1 Mile NW
M69	CAOG13000057460	1/2 - 1 Mile NNW
70	CAOG13000056730	1/2 - 1 Mile NW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
Q71	CAOG13000057741	1/2 - 1 Mile NE
Q72	CAOG13000057537	1/2 - 1 Mile NE
73	CAOG13000056235	1/2 - 1 Mile ESE
N74	CAOG13000055251	1/2 - 1 Mile NNE
75	CAOG13000161372	1/2 - 1 Mile WSW
76	CAOG13000057267	1/2 - 1 Mile NNW
77	CAOG13000057546	1/2 - 1 Mile ENE
78	CAOG13000057530	1/2 - 1 Mile NNE
R79	CAOG13000056250	1/2 - 1 Mile East
S80	CAOG13000057919	1/2 - 1 Mile North
S81	CAOG13000057917	1/2 - 1 Mile North
O82	CAOG13000057511	1/2 - 1 Mile North
T83	CAOG13000057911	1/2 - 1 Mile North
T84	CAOG13000057515	1/2 - 1 Mile NNE
T85	CAOG13000058136	1/2 - 1 Mile NNE
U86	CAOG13000058137	1/2 - 1 Mile NNE
87	CAOG13000056222	1/2 - 1 Mile East
R88	CAOG13000056223	1/2 - 1 Mile East
U89	CAOG13000057529	1/2 - 1 Mile NNE
V90	CAOG13000055273	1/2 - 1 Mile NNW
V91	CAOG13000054978	1/2 - 1 Mile NNW
S92	CAOG13000054951	1/2 - 1 Mile North
U93	CAOG13000057916	1/2 - 1 Mile NNE
S94	CAOG13000057286	1/2 - 1 Mile North
95	CAOG13000056234	1/2 - 1 Mile SE
V96	CAOG13000056896	1/2 - 1 Mile NNW
W97	CAOG13000057556	1/2 - 1 Mile ENE
98	CAOG13000056221	1/2 - 1 Mile ESE
X99	CAOG13000056731	1/2 - 1 Mile NW
100	CAOG13000057545	1/2 - 1 Mile NE
T101	CAOG13000057520	1/2 - 1 Mile NNE
T102	CAOG13000057736	1/2 - 1 Mile NNE
103	CAOG13000056748	1/2 - 1 Mile NW
Y104	CAOG13000057459	1/2 - 1 Mile NNW
V105	CAOG13000057735	1/2 - 1 Mile North
U106	CAOG13000058145	1/2 - 1 Mile NNE
107	CAOG13000057555	1/2 - 1 Mile ENE
Y108	CAOG13000057560	1/2 - 1 Mile NNW
109	CAOG13000056220	1/2 - 1 Mile ESE
Z110	CAOG13000175695	1/2 - 1 Mile SW
AA111	CAOG13000057571	1/2 - 1 Mile North
AB112	CAOG13000057924	1/2 - 1 Mile North
Y113	CAOG13000057266	1/2 - 1 Mile NNW
AC114	CAOG13000057536	1/2 - 1 Mile NNE
V115	CAOG13000057277	1/2 - 1 Mile NNW
AC116	CAOG13000057740	1/2 - 1 Mile NE
W117	CAOG13000057744	1/2 - 1 Mile ENE
Z118	CAOG13000175694	1/2 - 1 Mile SW
119	CAOG13000056233	1/2 - 1 Mile SE
AB120	CAOG13000054950	1/2 - 1 Mile North
AD121	CAOG13000057524	1/2 - 1 Mile NNE
X122	CAOG13000056834	1/2 - 1 Mile NW
123	CAOG13000056749	1/2 - 1 Mile NW
124	CAOG13000057544	1/2 - 1 Mile NE
AE125	CAOG13000056732	1/2 - 1 Mile NNW
AE126	CAOG13000056783	1/2 - 1 Mile NNW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AA127	CAOG13000057285	1/2 - 1 Mile North
128	CAOG13000056190	1/2 - 1 Mile ESE
AA129	CAOG13000057510	1/2 - 1 Mile North
AF130	CAOG13000056189	1/2 - 1 Mile East
AD131	CAOG13000057922	1/2 - 1 Mile NNE
AG132	CAOG13000056177	1/2 - 1 Mile East
AG133	CAOG13000056175	1/2 - 1 Mile East
134	CAOG13000057554	1/2 - 1 Mile ENE
135	CAOG13000056835	1/2 - 1 Mile WNW
AD136	CAOG13000058135	1/2 - 1 Mile NNE
AH137	CAOG13000056252	1/2 - 1 Mile SE
AI138	CAOG13000057733	1/2 - 1 Mile NNW
AJ139	CAOG13000056849	1/2 - 1 Mile ENE
AH140	CAOG13000056219	1/2 - 1 Mile SE
AG141	CAOG13000056205	1/2 - 1 Mile East
AA142	CAOG13000057563	1/2 - 1 Mile North
AJ143	CAOG13000055029	1/2 - 1 Mile ENE
AK144	CAOG13000055185	1/2 - 1 Mile North
AB145	CAOG13000057519	1/2 - 1 Mile North
146	CAOG13000155404	1/2 - 1 Mile SSW
AJ147	CAOG13000056882	1/2 - 1 Mile ENE
AL148	CAOG13000057276	1/2 - 1 Mile NNW
AF149	CAOG13000056208	1/2 - 1 Mile East
AM150	CAOG13000056796	1/2 - 1 Mile NW
AE151	CAOG13000056836	1/2 - 1 Mile NNW
AI152	CAOG13000057265	1/2 - 1 Mile NNW
153	CAOG13000056848	1/2 - 1 Mile ENE
AM154	CAOG13000056750	1/2 - 1 Mile NW
AN155	CAOG13000058142	1/2 - 1 Mile NNE
AL156	CAOG13000057562	1/2 - 1 Mile NNW
AN157	CAOG13000055379	1/2 - 1 Mile NNE
158	CAOG13000056779	1/2 - 1 Mile NW
AM159	CAOG13000056833	1/2 - 1 Mile NW
AO160	CAOG13000055295	1/2 - 1 Mile North
161	CAOG13000057543	1/2 - 1 Mile NE
AP162	CAOG13000057553	1/2 - 1 Mile NE
AQ163	CAOG13000055274	1/2 - 1 Mile NNE
AK164	CAOG13000057923	1/2 - 1 Mile North
165	CAOG13000056191	1/2 - 1 Mile ESE
AQ166	CAOG13000055204	1/2 - 1 Mile NNE
AO167	CAOG13000057915	1/2 - 1 Mile North
AR168	CAOG13000057918	1/2 - 1 Mile North
AO169	CAOG13000055328	1/2 - 1 Mile North
AO170	CAOG13000057912	1/2 - 1 Mile North
AS171	CAOG13000056733	1/2 - 1 Mile NNW
AS172	CAOG13000055183	1/2 - 1 Mile NNW
AN173	CAOG13000057528	1/2 - 1 Mile NNE
AO174	CAOG13000057518	1/2 - 1 Mile North
AT175	CAOG13000057561	1/2 - 1 Mile NNW
176	CAOG13000155422	1/2 - 1 Mile SSW
AT177	CAOG13000057559	1/2 - 1 Mile NNW
178	CAOG13000056847	1/2 - 1 Mile ENE
AT179	CAOG13000057558	1/2 - 1 Mile NNW
AS180	CAOG13000056784	1/2 - 1 Mile NNW
AU181	CAOG13000056850	1/2 - 1 Mile ENE
AV182	CAOG13000058134	1/2 - 1 Mile NNE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AW183	CAOG13000056251	1/2 - 1 Mile SE
AO184	CAOG13000058143	1/2 - 1 Mile North
AR185	CAOG13000057284	1/2 - 1 Mile North
AX186	CAOG13000056805	1/2 - 1 Mile NW
AW187	CAOG13000056218	1/2 - 1 Mile SE
AY188	CAOG13000056829	1/2 - 1 Mile NW
AY189	CAOG13000057457	1/2 - 1 Mile NW
AZ190	CAOG13000057275	1/2 - 1 Mile North
191	CAOG13000056193	1/2 - 1 Mile ESE
192	CAOG13000056178	1/2 - 1 Mile East
BA193	CAOG13000056867	1/2 - 1 Mile ENE
AP194	CAOG13000057743	1/2 - 1 Mile NE
195	CAOG13000151879	1/2 - 1 Mile South
BB196	CAOG13000056183	1/2 - 1 Mile East
BA197	CAOG13000056061	1/2 - 1 Mile ENE
AY198	CAOG13000056751	1/2 - 1 Mile NW
AZ199	CAOG13000055367	1/2 - 1 Mile NNW
200	CAOG13000056797	1/2 - 1 Mile NW
BC201	CAOG13000155410	1/2 - 1 Mile WSW
BD202	CAOG13000055188	1/2 - 1 Mile NE
203	CAOG13000057552	1/2 - 1 Mile NE
BE204	CAOG13000057734	1/2 - 1 Mile North
BF205	CAOG13000054986	1/2 - 1 Mile North
206	CAOG13000155419	1/2 - 1 Mile SW
BD207	CAOG13000057542	1/2 - 1 Mile NE
AV208	CAOG13000057564	1/2 - 1 Mile NNE
AS209	CAOG13000056832	1/2 - 1 Mile NNW
BF210	CAOG13000055151	1/2 - 1 Mile North
BC211	CAOG13000155408	1/2 - 1 Mile WSW
212	CAOG13000155405	1/2 - 1 Mile SSW
AT213	CAOG13000057264	1/2 - 1 Mile NNW
BG214	CAOG13000056846	1/2 - 1 Mile NE
BE215	CAOG13000055363	1/2 - 1 Mile North
BF216	CAOG13000057907	1/2 - 1 Mile North
BA217	CAOG13000058146	1/2 - 1 Mile ENE
AU218	CAOG13000056885	1/2 - 1 Mile ENE
BH219	CAOG13000057458	1/2 - 1 Mile NNW
BI220	CAOG13000056207	1/2 - 1 Mile ESE
BJ221	CAOG13000055336	1/2 - 1 Mile SE
222	CAOG13000057527	1/2 - 1 Mile NNE
AX223	CAOG13000056747	1/2 - 1 Mile NW
BA224	CAOG13000056884	1/2 - 1 Mile ENE
BG225	CAOG13000058344	1/2 - 1 Mile NE
BK226	CAOG13000055310	1/2 - 1 Mile West
BH227	CAOG13000056785	1/2 - 1 Mile NNW
BL228	CAOG13000056209	1/2 - 1 Mile ESE
AX229	CAOG13000055084	1/2 - 1 Mile NW
BH230	CAOG13000056734	1/2 - 1 Mile NNW
231	CAOG13000155425	1/2 - 1 Mile SSW
BK232	CAOG13000055309	1/2 - 1 Mile West
AV233	CAOG13000057526	1/2 - 1 Mile NNE
BJ234	CAOG13000056198	1/2 - 1 Mile SE
235	CAOG13000056772	1/2 - 1 Mile WNW
BB236	CAOG13000057777	1/2 - 1 Mile East
237	CAOG13000056188	1/2 - 1 Mile ESE
BM238	CAOG13000056851	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

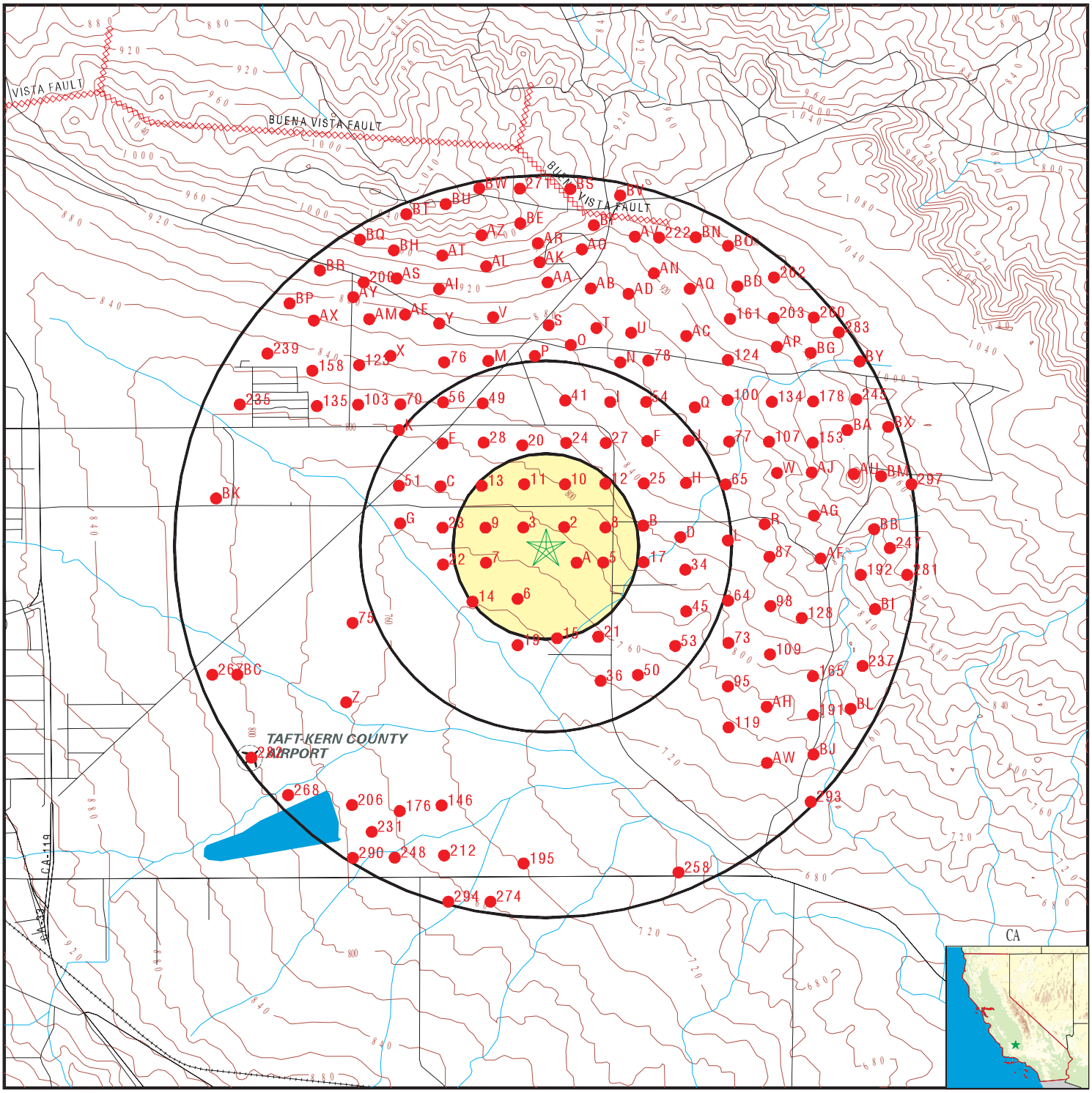
MAP ID	WELL ID	LOCATION FROM TP
239	CAOG13000056778	1/2 - 1 Mile NW
BN240	CAOG13000057535	1/2 - 1 Mile NNE
BH241	CAOG13000056807	1/2 - 1 Mile NNW
BN242	CAOG13000055168	1/2 - 1 Mile NNE
BI243	CAOG13000057778	1/2 - 1 Mile East
BO244	CAOG13000055366	1/2 - 1 Mile NNE
245	CAOG13000056866	1/2 - 1 Mile ENE
BC246	CAOG13000154019	1/2 - 1 Mile WSW
247	CAOG13000056212	1/2 - 1 Mile East
248	CAOG13000155417	1/2 - 1 Mile SSW
BM249	CAOG13000057750	1/2 - 1 Mile ENE
BC250	CAOG13000155407	1/2 - 1 Mile WSW
BP251	CAOG13000056777	1/2 - 1 Mile NW
BQ252	CAOG13000058298	1/2 - 1 Mile NNW
BR253	CAOG13000056781	1/2 - 1 Mile NW
BN254	CAOG13000057739	1/2 - 1 Mile NNE
BQ255	CAOG13000056798	1/2 - 1 Mile NNW
BQ256	CAOG13000056752	1/2 - 1 Mile NNW
BJ257	CAOG13000056206	1/2 - 1 Mile SE
258	CAOG13000176427	1/2 - 1 Mile SSE
BS259	CAOG13000055214	1/2 - 1 Mile North
260	CAOG13000056845	1/2 - 1 Mile NE
BR261	CAOG13000056828	1/2 - 1 Mile NW
262	CAOG13000057551	1/2 - 1 Mile NE
BT263	CAOG13000054964	1/2 - 1 Mile NNW
BR264	CAOG13000056812	1/2 - 1 Mile NW
BU265	CAOG13000057263	1/2 - 1 Mile NNW
BV266	CAOG13000057517	1/2 - 1 Mile North
267	CAOG13000155411	1/2 - 1 Mile WSW
268	CAOG13000155415	1/2 - 1 Mile SW
BU269	CAOG13000057281	1/2 - 1 Mile NNW
BL270	CAOG13000056194	1/2 - 1 Mile ESE
271	CAOG13000057283	1/2 - 1 Mile North
BP272	CAOG13000056826	1/2 - 1 Mile NW
BW273	CAOG13000057274	1/2 - 1 Mile North
274	CAOG13000155472	1/2 - 1 Mile South
BX275	CAOG13000056868	1/2 - 1 Mile ENE
BQ276	CAOG13000056808	1/2 - 1 Mile NNW
BO277	CAOG13000057541	1/2 - 1 Mile NNE
BV278	CAOG13000055047	1/2 - 1 Mile NNE
BS279	CAOG13000055150	1/2 - 1 Mile North
BS280	CAOG13000057292	1/2 - 1 Mile North
281	CAOG13000056181	1/2 - 1 Mile East
282	CAOG13000155416	1/2 - 1 Mile SW
283	CAOG13000055041	1/2 - 1 Mile NE
BY284	CAOG13000056865	1/2 - 1 Mile ENE
BQ285	CAOG13000056831	1/2 - 1 Mile NNW
BR286	CAOG13000054997	1/2 - 1 Mile NW
BR287	CAOG13000055006	1/2 - 1 Mile NW
BY288	CAOG13000055393	1/2 - 1 Mile ENE
BX289	CAOG13000057749	1/2 - 1 Mile ENE
290	CAOG13000155420	1/2 - 1 Mile SSW
BQ291	CAOG13000056810	1/2 - 1 Mile NNW
BT292	CAOG13000056735	1/2 - 1 Mile NNW
293	CAOG13000056204	1/2 - 1 Mile SE
294	CAOG13000155469	1/2 - 1 Mile SSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BQ295	CAOG13000056830	1/2 - 1 Mile NNW
BW296	CAOG13000058208	1/2 - 1 Mile NNW
297	CAOG13000056852	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 05811484.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- 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: Gas Company Road	CLIENT: Engeo Inc.
ADDRESS: Gas Company Road Taft CA 93268	CONTACT: Katherina Zecca INQUIRY #: 05811484.2r
LAT/LONG: 35.149926 / 119.423751	DATE: October 01, 2019 2:57 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

A1
SE
0 - 1/8 Mile

OIL_GAS **CAOG13000056241**

API #:	0402903136	Well #:	70-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

2
NE
0 - 1/8 Mile

OIL_GAS **CAOG13000056228**

API #:	0402903123	Well #:	37-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

3
NW
0 - 1/8 Mile

OIL_GAS **CAOG13000056229**

API #:	0402903124	Well #:	38-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

A4
ESE
1/8 - 1/4 Mile

OIL_GAS **CAOG13000056256**

API #:	0402903151	Well #:	269-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

5
ESE **OIL_GAS** **CAOG13000056240**
1/8 - 1/4 Mile

API #:	0402903135	Well #:	69-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

6
SSW **OIL_GAS** **CAOG13000056242**
1/8 - 1/4 Mile

API #:	0402903137	Well #:	73-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

7
WSW **OIL_GAS** **CAOG13000056231**
1/8 - 1/4 Mile

API #:	0402903126	Well #:	41-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

8
ENE **OIL_GAS** **CAOG13000056227**
1/8 - 1/4 Mile

API #:	0402903122	Well #:	36-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

9
WNW
1/8 - 1/4 Mile

OIL_GAS **CAOG13000056230**

API #:	0402903125	Well #:	40-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

10
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG13000057569**

API #:	0402911178	Well #:	390-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

11
NNW
1/8 - 1/4 Mile

OIL_GAS **CAOG13000057290**

API #:	0402911115	Well #:	29-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

12
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG13000057523**

API #:	0402911132	Well #:	49-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

13
NW
1/8 - 1/4 Mile

OIL_GAS **CAOG13000057280**

API #:	0402911105	Well #:	19-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

14
SW
1/8 - 1/4 Mile

OIL_GAS **CAOG13000056232**

API #:	0402903127	Well #:	42-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

15
South
1/8 - 1/4 Mile

OIL_GAS **CAOG13000056244**

API #:	0402903139	Well #:	88-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

B16
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056254**

API #:	0402903149	Well #:	235-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

17
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056239**

API #:	0402903134	Well #:	68-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

B18
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056226**

API #:	0402903121	Well #:	35-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

19
SSW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056243**

API #:	0402903138	Well #:	75-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

20
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057289**

API #:	0402911114	Well #:	28-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

21
SSE **OIL_GAS** **CAOG13000056245**
1/4 - 1/2 Mile

API #:	0402903140	Well #:	95-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

22
West **OIL_GAS** **CAOG13000056217**
1/4 - 1/2 Mile

API #:	0402903112	Well #:	2-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

23
West **OIL_GAS** **CAOG13000056216**
1/4 - 1/2 Mile

API #:	0402903111	Well #:	1-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

24
North **OIL_GAS** **CAOG13000057514**
1/4 - 1/2 Mile

API #:	0402911123	Well #:	38-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

25
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057533**

API #:	0402911142	Well #:	59-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

C26
WNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057271**

API #:	0402911096	Well #:	9-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

27
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057522**

API #:	0402911131	Well #:	48-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

28
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057568**

API #:	0402911177	Well #:	180-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

C29
WNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057557**

API #:	0402911166	Well #:	90-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

C30
WNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057570**

API #:	0402911179	Well #:	WS-1-8D
Well Status:	Plugged	Well Type:	WS
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

D31
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000055083**

API #:	0403047408	Well #:	661-17D
Well Status:	Canceled	Well Type:	OG
Operator Name:	Vintage Production California LLC		
Lease Name:	Lease by Vintage Production California LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

D32
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056253**

API #:	0402903148	Well #:	234-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

D33
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056238**

API #:	0402903133	Well #:	67-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

34
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056255**

API #:	0402903150	Well #:	267-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

D35
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056225**

API #:	0402903120	Well #:	34-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

36
SSE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056246**

API #:	0402903141	Well #:	97-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

E37
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057270**

API #:	0402911095	Well #:	8A-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

F38
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057532**

API #:	0402911141	Well #:	58-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

E39
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057269**

API #:	0402911094	Well #:	8-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

F40
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057565**

API #:	0402911174	Well #:	158-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

41
North
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057513**

API #:	0402911122	Well #:	37-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

G42
West
1/4 - 1/2 Mile

OIL_GAS **CAOG13000055081**

API #:	0403053768	Well #:	5-3-18D
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

G43
West
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056257**

API #:	0402903152	Well #:	10-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

H44
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057567**

API #:	0402911176	Well #:	169-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

45
ESE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056248**

API #:	0402903143	Well #:	109-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

H46
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057539**

API #:	0402911148	Well #:	69-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

I48
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057521**

API #:	0402911130	Well #:	47-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

I47
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057288**

API #:	0402911113	Well #:	27-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

49
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057279**

API #:	0402911104	Well #:	17-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

50
SE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056247**

API #:	0402903142	Well #:	103-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

51
WNW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056728**

API #:	0402902786	Well #:	21-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

I52
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057738**

API #:	0402913380	Well #:	545-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

53
SE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056249**

API #:	0402903144	Well #:	110-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

54
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057531**

API #:	0402911140	Well #:	57-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

J55
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057538**

API #:	0402911147	Well #:	68-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

56
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057268**

API #:	0402911093	Well #:	7-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

J57
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG13000057566**

API #:	0402911175	Well #:	168-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

K58
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056729**

API #:	0402902787	Well #:	22-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

L59
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056237**

API #:	0402903132	Well #:	65-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

L60
East
1/4 - 1/2 Mile

OIL_GAS **CAOG13000056224**

API #:	0402903119	Well #:	32-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

M61
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057278**

API #:	0402911103	Well #:	16-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

N62
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057484**

API #:	0402909717	Well #:	46-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

O63
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057512**

API #:	0402911121	Well #:	36-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

64
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056236**

API #:	0402903131	Well #:	64-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

65
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057547**

API #:	0402911156	Well #:	79-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

P66
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057287**

API #:	0402911112	Well #:	26-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

P67
North
1/2 - 1 Mile

OIL_GAS **CAOG13000054955**

API #:	0403047106	Well #:	3-5-8D
Well Status:	Canceled	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

K68
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056782**

API #:	0402902840	Well #:	224-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

M69
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057460**

API #:	0402909693	Well #:	325-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

70
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056730**

API #:	0402902788	Well #:	24-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Q71
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057741**

API #:	0402913383	Well #:	2-555-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Q72
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057537**

API #:	0402911146	Well #:	67-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

73
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056235**

API #:	0402903130	Well #:	63-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

N74
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055251**

API #:	0403033088	Well #:	57X-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

75
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000161372**

API #:	0402944948	Well #:	573
Well Status:	Plugged	Well Type:	DH
Operator Name:	Crimson Resource Management Corp.		
Lease Name:	Lease by Crimson Resource Management Corp.		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

76
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057267**

API #:	0402911092	Well #:	6-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

77
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057546**

API #:	0402911155	Well #:	78-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

78
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057530**

API #:	0402911139	Well #:	56-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

R79
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056250**

API #:	0402903145	Well #:	131-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

S80
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057919**

API #:	0402941162	Well #:	25W-1-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

S81
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057917**

API #:	0402941173	Well #:	25W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

O82
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057511**

API #:	0402911120	Well #:	35-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

T83
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057911**

API #:	0402941180	Well #:	35W-1-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

T84
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057515**

API #:	0402911124	Well #:	40-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

T85
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058136**

API #:	0402941234	Well #:	35W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

U86
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058137**

API #:	0402941235	Well #:	45W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

87
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056222**

API #:	0402903117	Well #:	30-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

R88
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056223**

API #:	0402903118	Well #:	31-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

U89
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057529**

API #:	0402911138	Well #:	55-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

V90
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000055273**

API #:	0403034125	Well #:	15X-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

V91
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000054978**

API #:	0403044773	Well #:	615-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	10/16/2011

S92
North
1/2 - 1 Mile

OIL_GAS **CAOG13000054951**

API #:	0403046964	Well #:	4-5BH-8D
Well Status:	Canceled	Well Type:	OG
Operator Name:	Vintage Production California LLC		
Lease Name:	Lease by Vintage Production California LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

U93
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057916**

API #:	0402941191	Well #:	45W-1-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

S94
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057286**

API #:	0402911111	Well #:	25-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

95
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056234**

API #:	0402903129	Well #:	61-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

V96
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056896**

API #:	0403048560	Well #:	624XH-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	09/18/2012

Map ID
Direction
Distance

Database EDR ID Number

W97
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057556**

API #:	0402911165	Well #:	89-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

98
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056221**

API #:	0402903116	Well #:	29-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

X99
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056731**

API #:	0402902789	Well #:	25-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

100
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057545**

API #:	0402911154	Well #:	77-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

T101
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057520**

API #:	0402911129	Well #:	45-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

T102
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057736**

API #:	0402913378	Well #:	534-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

103
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056748**

API #:	0402902806	Well #:	59-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Y104
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057459**

API #:	0402909692	Well #:	305-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

V105
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057735**

API #:	0402913377	Well #:	524-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

U106
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058145**

API #:	0402941336	Well #:	155-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

107
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057555**

API #:	0402911164	Well #:	88-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Y108
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057560**

API #:	0402911169	Well #:	105-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

109
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056220**

API #:	0402903115	Well #:	27-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Z110
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000175695**

API #:	0403000762	Well #:	524
Well Status:	Canceled	Well Type:	OG
Operator Name:	Chevron USA Inc.	Lease Name:	Lease by Chevron USA Inc.
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	mip	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AA111
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057571**

API #:	0402911180	Well #:	24W-8D
Well Status:	Plugged	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AB112
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057924**

API #:	0402941125	Well #:	34W-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

Y113
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057266**

API #:	0402911091	Well #:	5-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AC114
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057536**

API #:	0402911145	Well #:	65-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

V115
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057277**

API #:	0402911102	Well #:	15-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AC116
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057740**

API #:	0402913382	Well #:	554-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

W117
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057744**

API #:	0402913386	Well #:	566-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Z118
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000175694**

API #:	0403000761	Well #:	523-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

119
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056233**

API #:	0402903128	Well #:	60-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AB120
North
1/2 - 1 Mile

OIL_GAS **CAOG13000054950**

API #:	0403046963	Well #:	4-4AH-8D
Well Status:	Canceled	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AD121
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057524**

API #:	0402911133	Well #:	50-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

X122
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056834**

API #:	0402902892	Well #:	8-5-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

123
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056749**

API #:	0402902807	Well #:	60-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

124
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057544**

API #:	0402911153	Well #:	76-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AE125
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056732**

API #:	0402902790	Well #:	26-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AE126
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056783**

API #:	0402902841	Well #:	226-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AA127
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057285**

API #:	0402911110	Well #:	24-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

128
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056190**

API #:	0402903085	Well #:	17-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AA129
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057510**

API #:	0402911119	Well #:	34-8D
Well Status:	Idle	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AF130
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056189**

API #:	0402903084	Well #:	16-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

AD131
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057922**

API #:	0402941123	Well #:	44W-1
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AG132
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056177**

API #:	0402903072	Well #:	3-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

Map ID
Direction
Distance

Database EDR ID Number

AG133
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056175**

API #:	0402903070	Well #:	1-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

134
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057554**

API #:	0402911163	Well #:	87-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

135
WNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056835**

API #:	0402902893	Well #:	8-8-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	06/14/1965

AD136
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058135**

API #:	0402941228	Well #:	44W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AH137
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056252**

API #:	0402903147	Well #:	225-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AI138
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057733**

API #:	0402913375	Well #:	503-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AJ139
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056849**

API #:	0402902907	Well #:	11-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AH140
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056219**

API #:	0402903114	Well #:	25-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AG141
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056205**

API #:	0402903100	Well #:	101-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

AA142
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057563**

API #:	0402911172	Well #:	122-8D
Well Status:	Idle	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AJ143
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000055029**

API #:	0403047725	Well #:	617X-9D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	08/21/2012

AK144
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055185**

API #:	0403029253	Well #:	23G-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AB145
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057519**

API #:	0402911128	Well #:	44-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

146
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155404**

API #:	0402907202	Well #:	10-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AJ147
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056882**

API #:	0402902940	Well #:	109-9D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AL148
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057276**

API #:	0402911101	Well #:	14-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AF149
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056208**

API #:	0402903103	Well #:	2-2-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

AM150
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056796**

API #:	0402902854	Well #:	261-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AE151
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056836**

API #:	0402902894	Well #:	9-4-7D
Well Status:	Idle	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AI152
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057265**

API #:	0402911090	Well #:	4-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

153
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056848**

API #:	0402902906	Well #:	10-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AM154
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056750**

API #:	0402902808	Well #:	61-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AN155
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058142**

API #:	0402941290	Well #:	154-8D
Well Status:	Plugged	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AL156
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057562**

API #:	0402911171	Well #:	113-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AN157
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055379**

API #:	0403024196	Well #:	154G-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

158
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056779**

API #:	0402902837	Well #:	112-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AM159
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056833**

API #:	0402902891	Well #:	8-4-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AO160
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055295**

API #:	0402986344	Well #:	33G-8D
Well Status:	Idle	Well Type:	GAS
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

161
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057543**

API #:	0402911152	Well #:	75-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AP162
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057553**

API #:	0402911162	Well #:	86-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AQ163
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055274**

API #:	0403034126	Well #:	64X-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AK164
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057923**

API #:	0402941124	Well #:	23W-1-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

165
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056191**

API #:	0402903086	Well #:	18-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

AQ166
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055204**

API #:	0403037210	Well #:	464-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	01/09/2009

AO167
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057915**

API #:	0402941190	Well #:	33W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AR168
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057918**

API #:	0402941161	Well #:	23W-2-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AO169
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055328**

API #:	0402983084	Well #:	33-G
Well Status:	Canceled	Well Type:	OG
Operator Name:	Texaco Producing Inc.	Lease Name:	Lease by Texaco Producing Inc.
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	mip	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AO170
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057912**

API #:	0402941186	Well #:	33W-1-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AS171
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056733**

API #:	0402902791	Well #:	27-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	10/15/1928

AS172
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000055183**

API #:	0403029610	Well #:	5D-616
Well Status:	Canceled	Well Type:	OG
Operator Name:	Crimson Resource Management Corp.		
Lease Name:	Lease by Crimson Resource Management Corp.		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	mip	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AN173
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057528**

API #:	0402911137	Well #:	54-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AO174
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057518**

API #:	0402911127	Well #:	43-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AT175
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057561**

API #:	0402911170	Well #:	112-8D
Well Status:	Idle	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	Not Reported

176
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155422**

API #:	0402907220	Well #:	20-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AT177
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057559**

API #:	0402911168	Well #:	103-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

178
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056847**

API #:	0402902905	Well #:	8-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AT179
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057558**

API #:	0402911167	Well #:	102-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AS180
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056784**

API #:	0402902842	Well #:	227-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AU181
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056850**

API #:	0402902908	Well #:	12-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AV182
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000058134**

API #:	0402941227	Well #:	43W-8D
Well Status:	Plugged	Well Type:	INJ
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AW183
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056251**

API #:	0402903146	Well #:	224-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AO184
North
1/2 - 1 Mile

OIL_GAS **CAOG13000058143**

API #:	0402941308	Well #:	33-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AR185
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057284**

API #:	0402911109	Well #:	23-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AX186
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056805**

API #:	0402902863	Well #:	365-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AW187
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056218**

API #:	0402903113	Well #:	24-17D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AY188
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056829**

API #:	0402902887	Well #:	7-4-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AY189
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000057457**

API #:	0402909690	Well #:	374-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AZ190
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057275**

API #:	0402911100	Well #:	13-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

191
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056193**

API #:	0402903088	Well #:	20-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

192
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056178**

API #:	0402903073	Well #:	4-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

Map ID
Direction
Distance

Database EDR ID Number

BA193
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056867**

API #:	0402902925	Well #:	50-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AP194
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057743**

API #:	0402913385	Well #:	564-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

195
South
1/2 - 1 Mile

OIL_GAS **CAOG13000151879**

API #:	0403052661	Well #:	3-7-17D
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BB196
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056183**

API #:	0402903078	Well #:	9-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

Map ID
Direction
Distance

Database EDR ID Number

BA197
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056061**

API #:	0402902956	Well #:	2-9-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AY198
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056751**

API #:	0402902809	Well #:	62-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AZ199
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000055367**

API #:	0403018008	Well #:	112A-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	Not Reported

200
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056797**

API #:	0402902855	Well #:	262-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BC201
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155410**

API #:	0402907208	Well #:	5-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BD202
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000055188**

API #:	0403029144	Well #:	663-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

203
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057552**

API #:	0402911161	Well #:	85-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BE204
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057734**

API #:	0402913376	Well #:	522-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BF205
North
1/2 - 1 Mile

OIL_GAS **CAOG13000054986**

API #:	0403044720	Well #:	643-8D
Well Status:	Canceled	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

206
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000155419**

API #:	0402907217	Well #:	17-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BD207
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057542**

API #:	0402911151	Well #:	74-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AV208
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057564**

API #:	0402911173	Well #:	153-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AS209
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056832**

API #:	0402902890	Well #:	8-3-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BF210
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055151**

API #:	0403044232	Well #:	651H-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	01/08/2012

BC211
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155408**

API #:	0402907206	Well #:	3-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

212
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155405**

API #:	0402907203	Well #:	18-17D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AT213
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057264**

API #:	0402911089	Well #:	3-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BG214
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000056846**

API #:	0402902904	Well #:	7-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BE215
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055363**

API #:	0403018813	Well #:	531-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	Not Reported

BF216
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057907**

API #:	0402913424	Well #:	532-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BA217
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000058146**

API #:	0402941688	Well #:	9-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AU218
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056885**

API #:	0402902943	Well #:	138-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BH219
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057458**

API #:	0402909691	Well #:	383-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BI220
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056207**

API #:	0402903102	Well #:	12-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BJ221
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000055336**

API #:	0402980953	Well #:	516X-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

222
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057527**

API #:	0402911136	Well #:	53-8D
Well Status:	Idle	Well Type:	GAS
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

AX223
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056747**

API #:	0402902805	Well #:	51-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BA224
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056884**

API #:	0402902942	Well #:	128-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BG225
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000058344**

API #:	0402968788	Well #:	11-5-9D
Well Status:	Idle	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BK226
West
1/2 - 1 Mile

OIL_GAS **CAOG13000055310**

API #:	0402989128	Well #:	2-521A-7D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	06/09/1992

BH227
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056785**

API #:	0402902843	Well #:	228-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BL228
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056209**

API #:	0402903104	Well #:	2-5-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

AX229
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000055084**

API #:	0403047409	Well #:	664-7D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Operator	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	05/17/2012

BH230
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056734**

API #:	0402902792	Well #:	28-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

231
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155425**

API #:	0402907223	Well #:	8-8-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BK232
West
1/2 - 1 Mile

OIL_GAS **CAOG13000055309**

API #:	0402989127	Well #:	520-7D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

AV233
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057526**

API #:	0402911135	Well #:	52-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BJ234
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056198**

API #:	0402903093	Well #:	25-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

235
WNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056772**

API #:	0402902830	Well #:	99-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BB236
East
1/2 - 1 Mile

OIL_GAS **CAOG13000057777**

API #:	0402913419	Well #:	521-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

237
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056188**

API #:	0402903083	Well #:	15-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

BM238
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056851**

API #:	0402902909	Well #:	13-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

239
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056778**

API #:	0402902836	Well #:	105-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BN240
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057535**

API #:	0402911144	Well #:	63-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BH241
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056807**

API #:	0402902865	Well #:	429-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BN242
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055168**

API #:	0403041782	Well #:	663X-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	04/22/2011

BI243
East
1/2 - 1 Mile

OIL_GAS **CAOG13000057778**

API #:	0402913420	Well #:	522H-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BO244
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055366**

API #:	0403018007	Well #:	73A-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

245
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056866**

API #:	0402902924	Well #:	47-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BC246
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000154019**

API #:	0403048980	Well #:	6-4-18D
Well Status:	Canceled	Well Type:	OG
Operator Name:	Vintage Production California LLC		
Lease Name:	Lease by Vintage Production California LLC		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

247
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056212**

API #:	0402903107	Well #:	3-2-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

248
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155417**

API #:	0402907215	Well #:	15-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BM249
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057750**

API #:	0402913392	Well #:	526-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	mip	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BC250
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155407**

API #:	0402907205	Well #:	2-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BP251
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056777**

API #:	0402902835	Well #:	104-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ252
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000058298**

API #:	0402971633	Well #:	8-1B-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

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Map ID
Direction
Distance

Database EDR ID Number

BR253
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056781**

API #:	0402902839	Well #:	117-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BN254
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057739**

API #:	0402913381	Well #:	552-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ255
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056798**

API #:	0402902856	Well #:	263-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ256
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056752**

API #:	0402902810	Well #:	63-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BJ257
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056206**

API #:	0402903101	Well #:	225-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

258
SSE
1/2 - 1 Mile

OIL_GAS **CAOG13000176427**

API #:	0403003117	Well #:	MW-1A
Well Status:	Idle	Well Type:	OB
Operator Name:	Valley Water Management Company		
Lease Name:	Lease by Valley Water Management Company		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BS259
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055214**

API #:	0403036653	Well #:	532X-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	01/21/2009

260
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000056845**

API #:	0402902903	Well #:	6-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BR261
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056828**

API #:	0402902886	Well #:	7-3-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

262
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000057551**

API #:	0402911160	Well #:	84-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BT263
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000054964**

API #:	0403047360	Well #:	682XH-7D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	07/29/2012

BR264
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056812**

API #:	0402902870	Well #:	2117-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

BU265
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057263**

API #:	0402911088	Well #:	2-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BV266
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057517**

API #:	0402911126	Well #:	42-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

267
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155411**

API #:	0402907209	Well #:	6-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

268
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000155415**

API #:	0402907213	Well #:	13-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BU269
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000057281**

API #:	0402911106	Well #:	20-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BL270
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000056194**

API #:	0402903089	Well #:	21-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

271
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057283**

API #:	0402911108	Well #:	22-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BP272
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000056826**

API #:	0402902884	Well #:	6-4-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BW273
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057274**

API #:	0402911099	Well #:	12-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

274
South
1/2 - 1 Mile

OIL_GAS **CAOG13000155472**

API #:	0402907270	Well #:	21-20D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BX275
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056868**

API #:	0402902926	Well #:	51-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ276
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056808**

API #:	0402902866	Well #:	431-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BO277
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000057541**

API #:	0402911150	Well #:	73-8D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BV278
NNE
1/2 - 1 Mile

OIL_GAS **CAOG13000055047**

API #:	0403054764	Well #:	652XH-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	11/30/2014

BS279
North
1/2 - 1 Mile

OIL_GAS **CAOG13000055150**

API #:	0403044231	Well #:	621H-8D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	08/31/2011

BS280
North
1/2 - 1 Mile

OIL_GAS **CAOG13000057292**

API #:	0402911117	Well #:	32-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

281
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056181**

API #:	0402903076	Well #:	7-16D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

282
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000155416**

API #:	0402907214	Well #:	14-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

283
NE
1/2 - 1 Mile

OIL_GAS **CAOG13000055041**

API #:	0403055505	Well #:	615XH-9D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	11/30/2014

BY284
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000056865**

API #:	0402902923	Well #:	46-9D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BQ285
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056831**

API #:	0402902889	Well #:	8-2-7D
Well Status:	Plugged	Well Type:	Multi
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BR286
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000054997**

API #:	0403046208	Well #:	6-4AH-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	02/12/2012

BR287
NW
1/2 - 1 Mile

OIL_GAS **CAOG13000055006**

API #:	0403046364	Well #:	6-4BH-7D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	02/01/2012

BY288
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000055393**

API #:	0403054222	Well #:	616XH-9D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	Well Summary	Confidential Well:	N
Directionally Drilled:	Y	SPUD Date:	06/02/2014

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

BX289
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000057749**

API #:	0402913391	Well #:	525-9D
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

290
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155420**

API #:	0402907218	Well #:	18-18D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ291
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056810**

API #:	0402902868	Well #:	465-7D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BT292
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056735**

API #:	0402902793	Well #:	29-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

293
SE
1/2 - 1 Mile

OIL_GAS **CAOG13000056204**

API #:	0402903099	Well #:	31-16D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Derby	Field Name:	Buena Vista
Area Name:	Buena Vista Hills	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

294
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000155469**

API #:	0402907267	Well #:	11-20D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Lease by California Resources Production Corporation		
Field Name:	Midway-Sunset	Area Name:	Any Area
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BQ295
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000056830**

API #:	0402902888	Well #:	8-1-7D
Well Status:	Plugged	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

BW296
NNW
1/2 - 1 Mile

OIL_GAS **CAOG13000058208**

API #:	0402951260	Well #:	12A-8D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

297
East
1/2 - 1 Mile

OIL_GAS **CAOG13000056852**

API #:	0402902910	Well #:	14-9D
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Elk Hills, LLC		
Lease Name:	Lease by California Resources Elk Hills, LLC		
Field Name:	Buena Vista	Area Name:	Buena Vista Hills
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93268	9	1

Federal EPA Radon Zone for KERN County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 93268

Number of sites tested: 7

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.100 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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DRAFT

APPENDIX B

ENVIRONMENTAL DATA RESOURCES, INC.

Sanborn Map Report

Gas Company Road

Gas Company Road

Taft, CA 93268

Inquiry Number: 5811484.3

October 01, 2019

Certified Sanborn® Map Report

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

Certified Sanborn® Map Report

10/01/19

Site Name:

Gas Company Road
Gas Company Road
Taft, CA 93268
EDR Inquiry # 5811484.3

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Katherina Zecca

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Engeo Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7F6F-462C-BCFA

PO # NA

Project Gas Company Road

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 7F6F-462C-BCFA

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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DRAFT

APPENDIX C

ENVIRONMENTAL DATA RESOURCES, INC.

Historical Topographic Map Report

Gas Company Road

Gas Company Road

Taft, CA 93268

Inquiry Number: 5811484.4

October 01, 2019

EDR Historical Topo Map Report

with QuadMatch™

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

EDR Historical Topo Map Report

10/01/19

Site Name:

Gas Company Road
Gas Company Road
Taft, CA 93268
EDR Inquiry # 5811484.4

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Katherina Zecca

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Engeo Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: Gas Company Road

Coordinates:

Latitude:	35.149926 35° 9' 0" North
Longitude:	-119.423751 -119° 25' 26" West
UTM Zone:	Zone 11 North
UTM X Meters:	279210.50
UTM Y Meters:	3892359.02
Elevation:	771.29' above sea level

Maps Provided:

2012
1973
1951
1950
1947
1944
1912
1910

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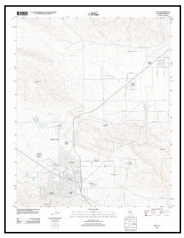
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

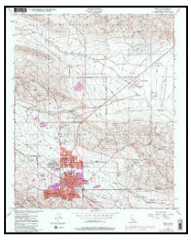
2012 Source Sheets



Taft

7.5-minute, 24000

1973 Source Sheets



Taft

7.5-minute, 24000
Aerial Photo Revised 1973

1951 Source Sheets

Taft

7.5-minute, 24000
Aerial Photo Revised 1942

1950 Source Sheets

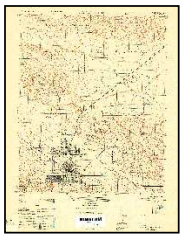
Taft

7.5-minute, 24000
Aerial Photo Revised 1942

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

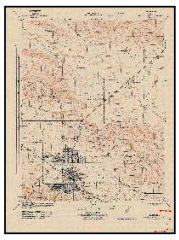
1947 Source Sheets



TAFT

7.5-minute, 25000

1944 Source Sheets



BUENA VISTA HILLS

7.5-minute, 31680

1912 Source Sheets

Buena Vista Lake

30-minute, 125000

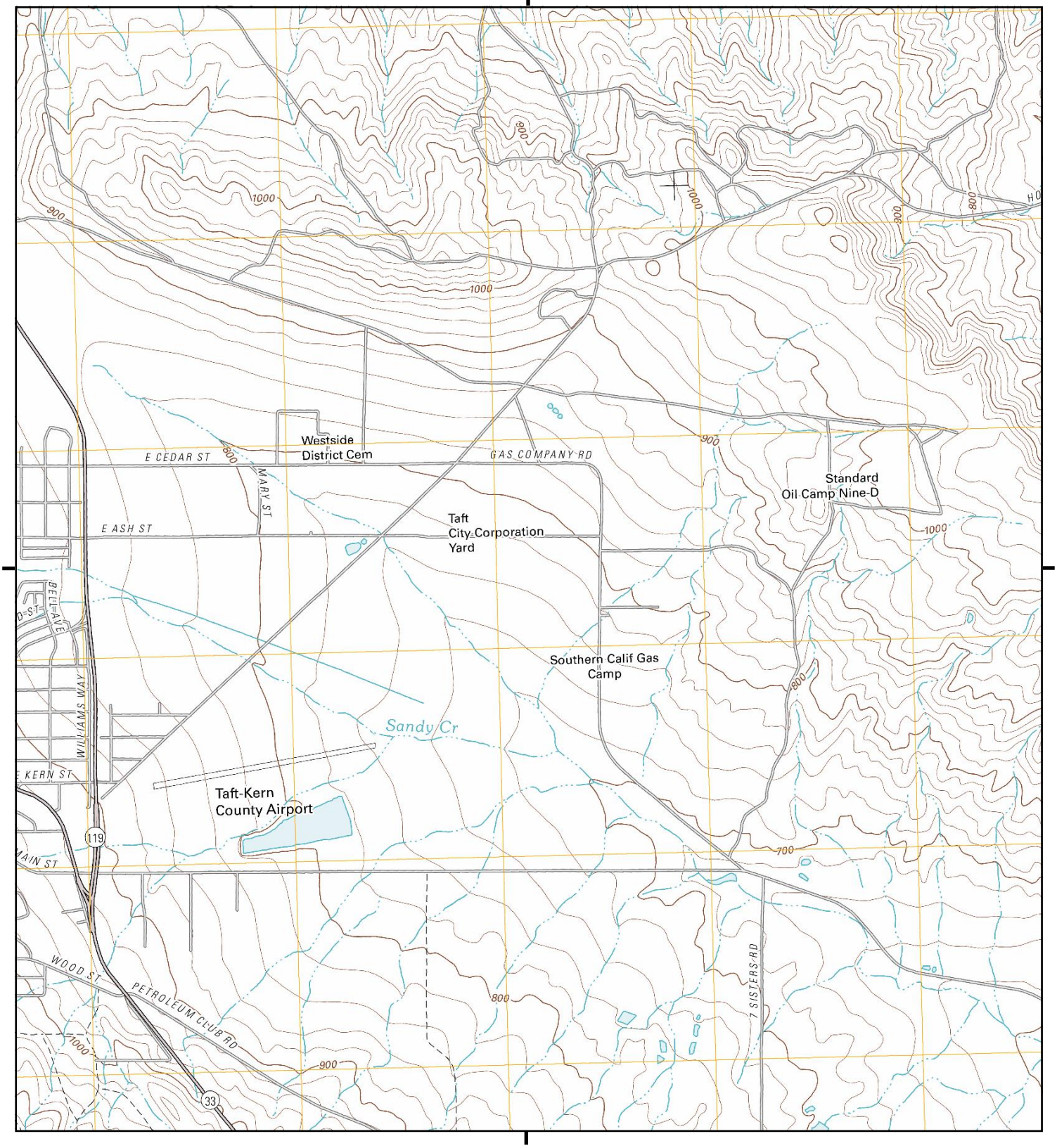
1910 Source Sheets

Buena Vista Lake

30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

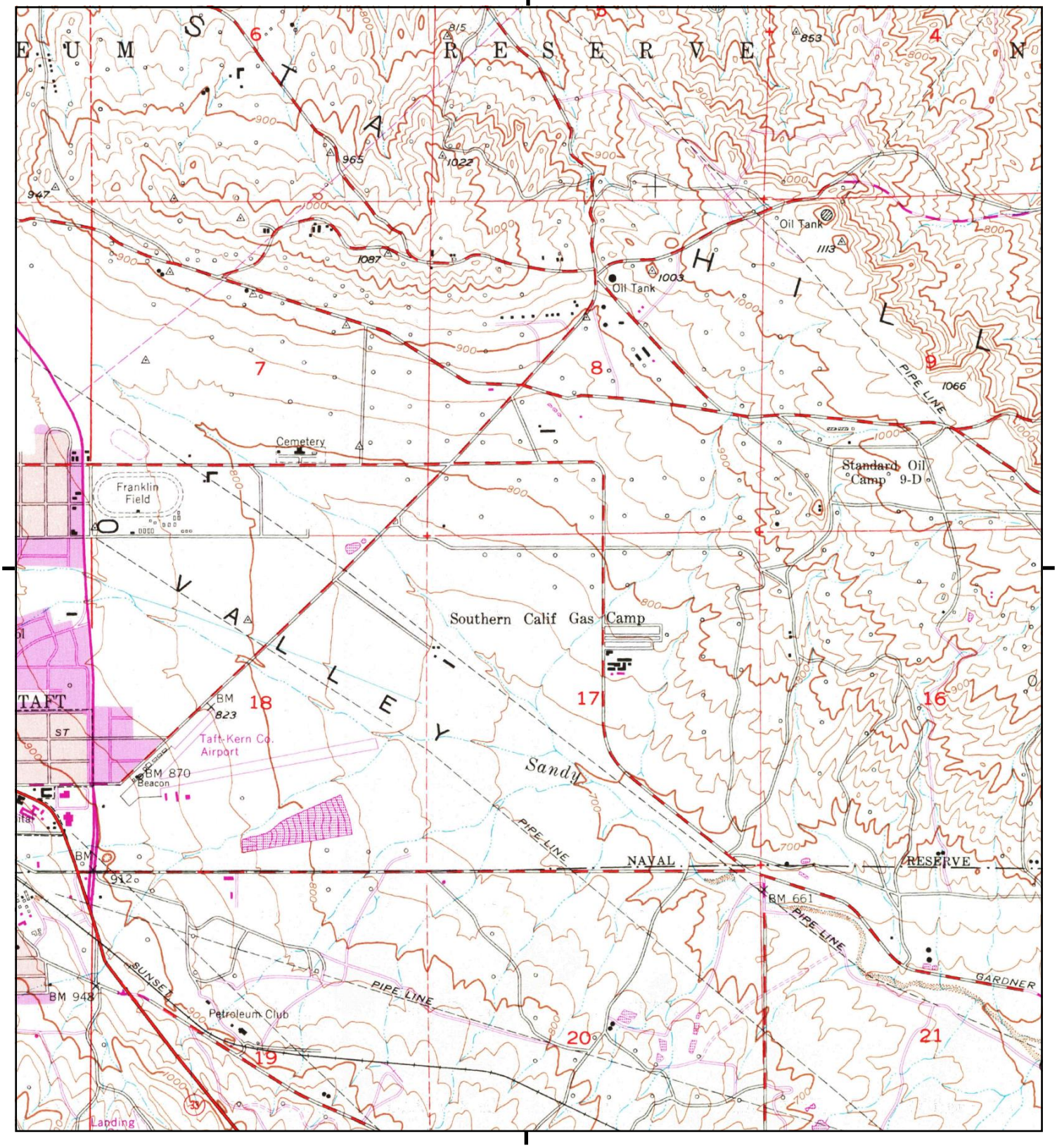
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taft, 2012, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

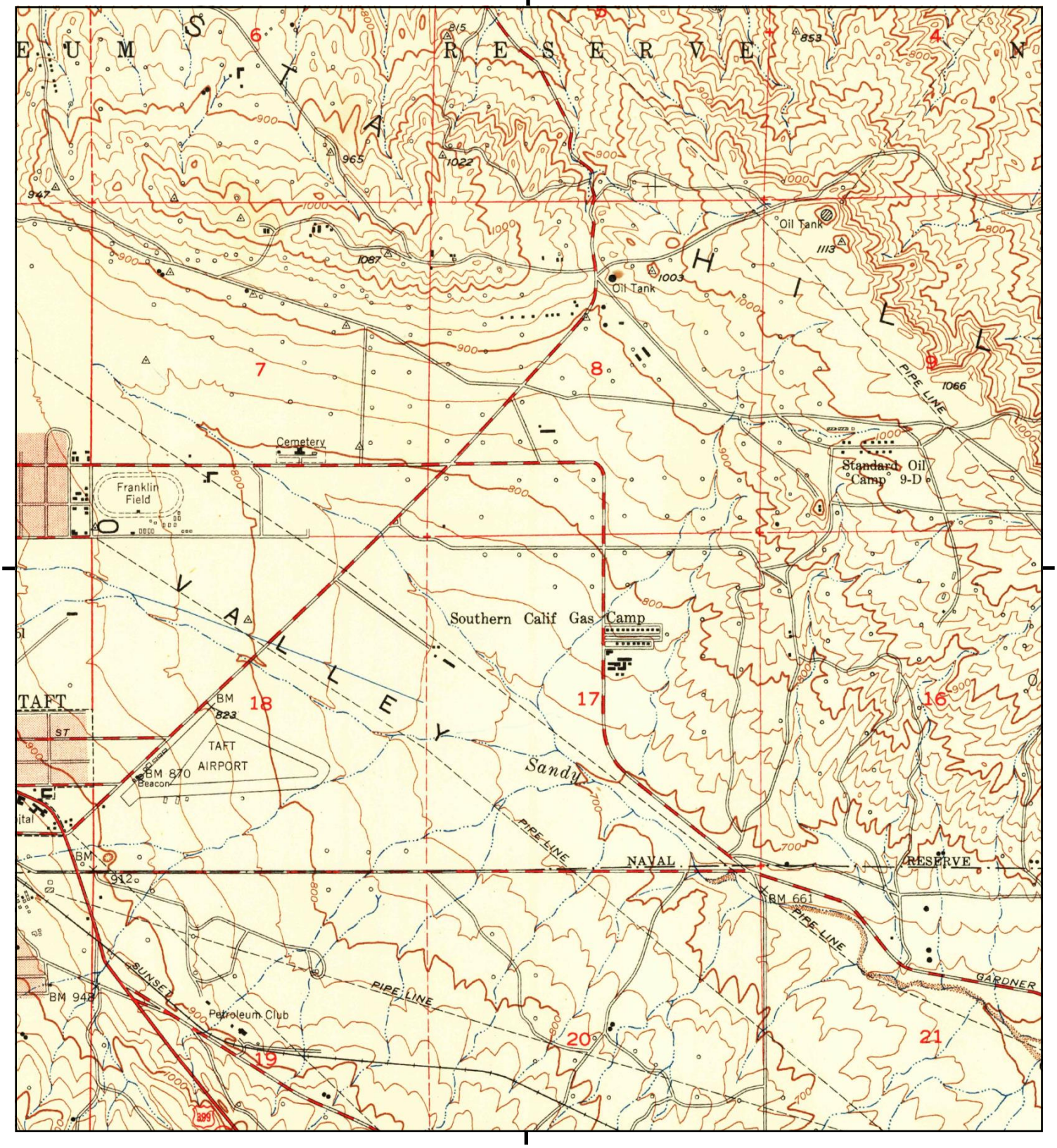
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taft, 1973, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

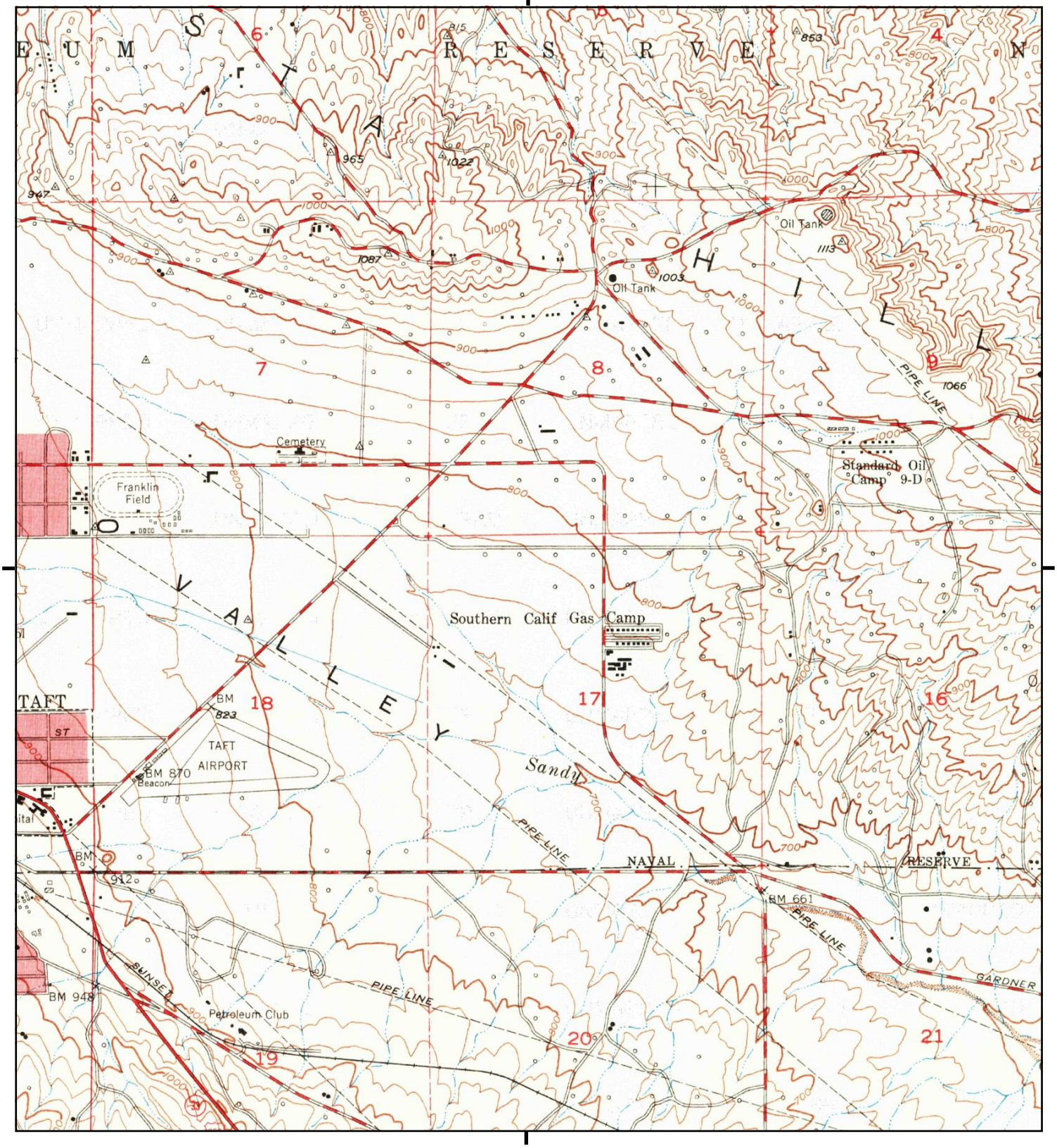
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taft, 1951, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

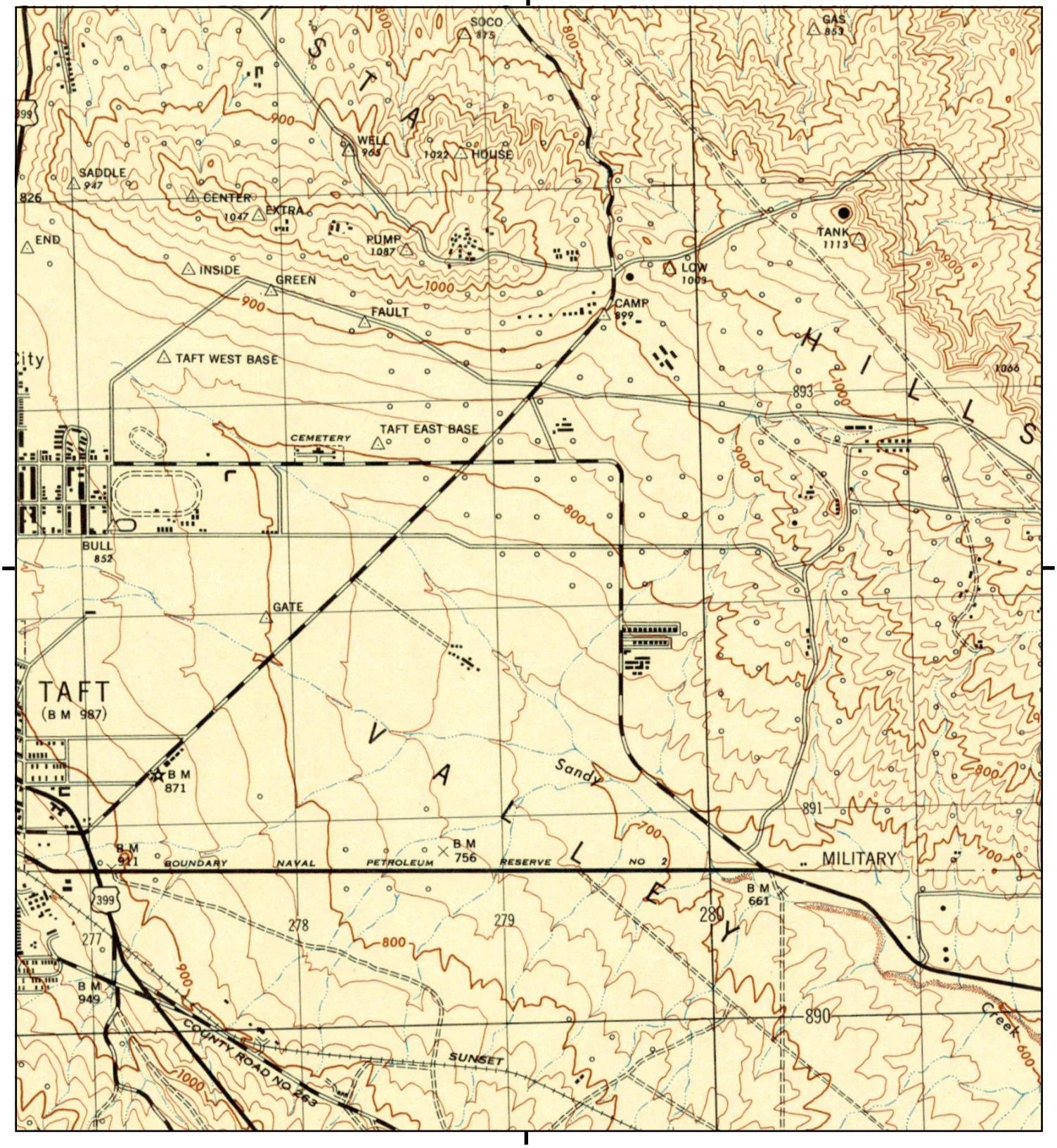
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taft, 1950, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

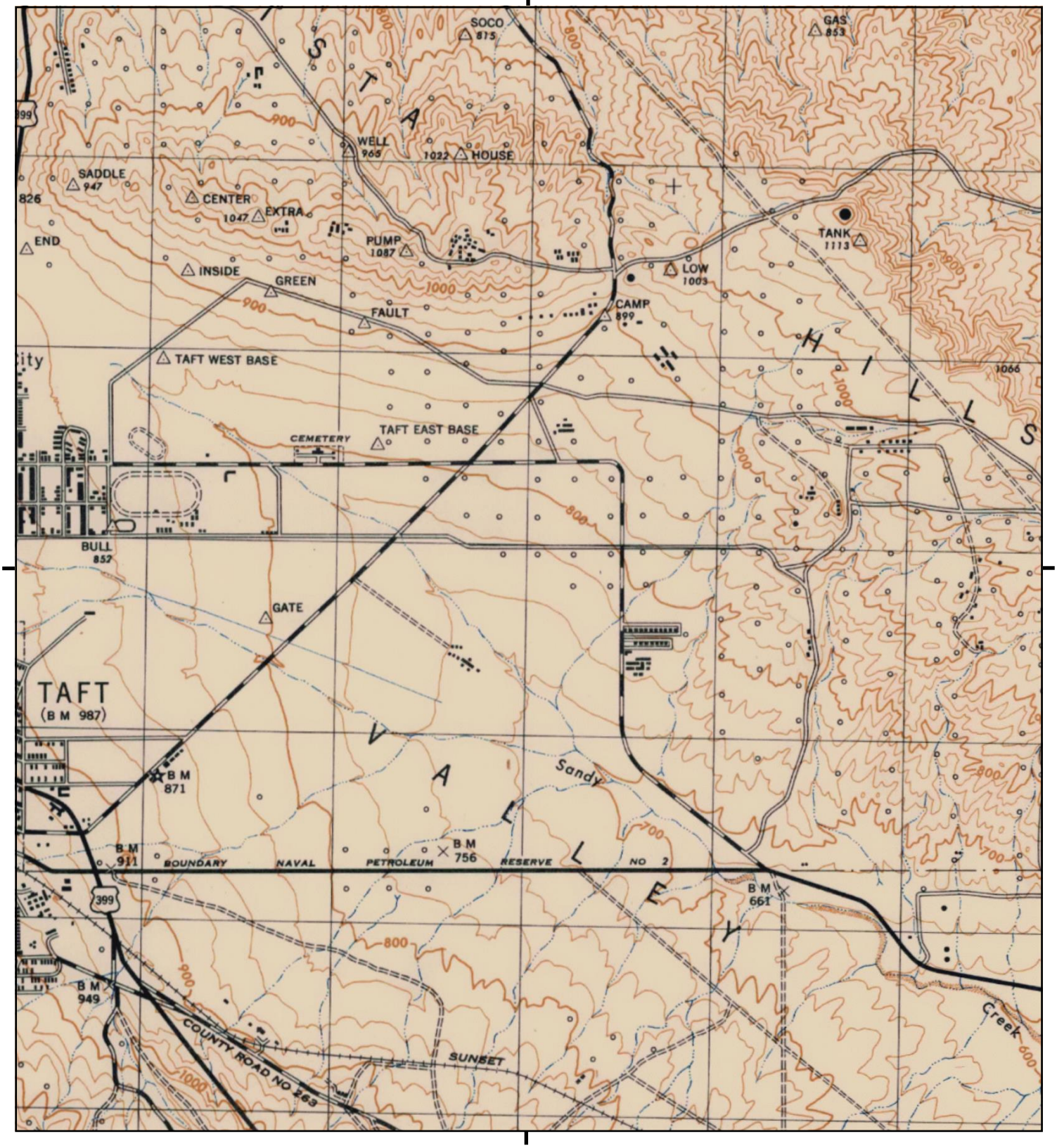
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, TAFT, 1947, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

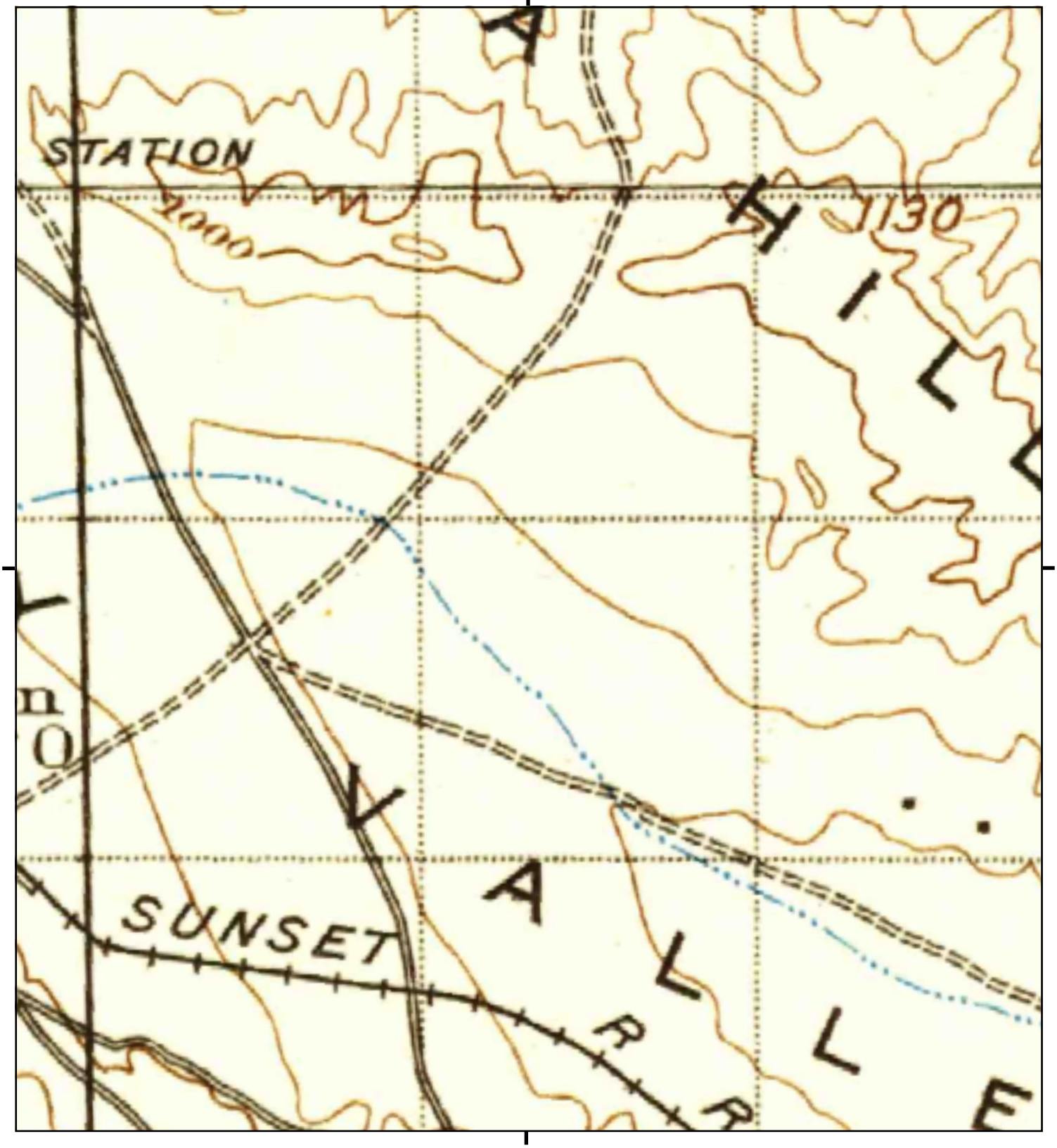
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, BUENA VISTA HILLS, 1944, 7.5-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

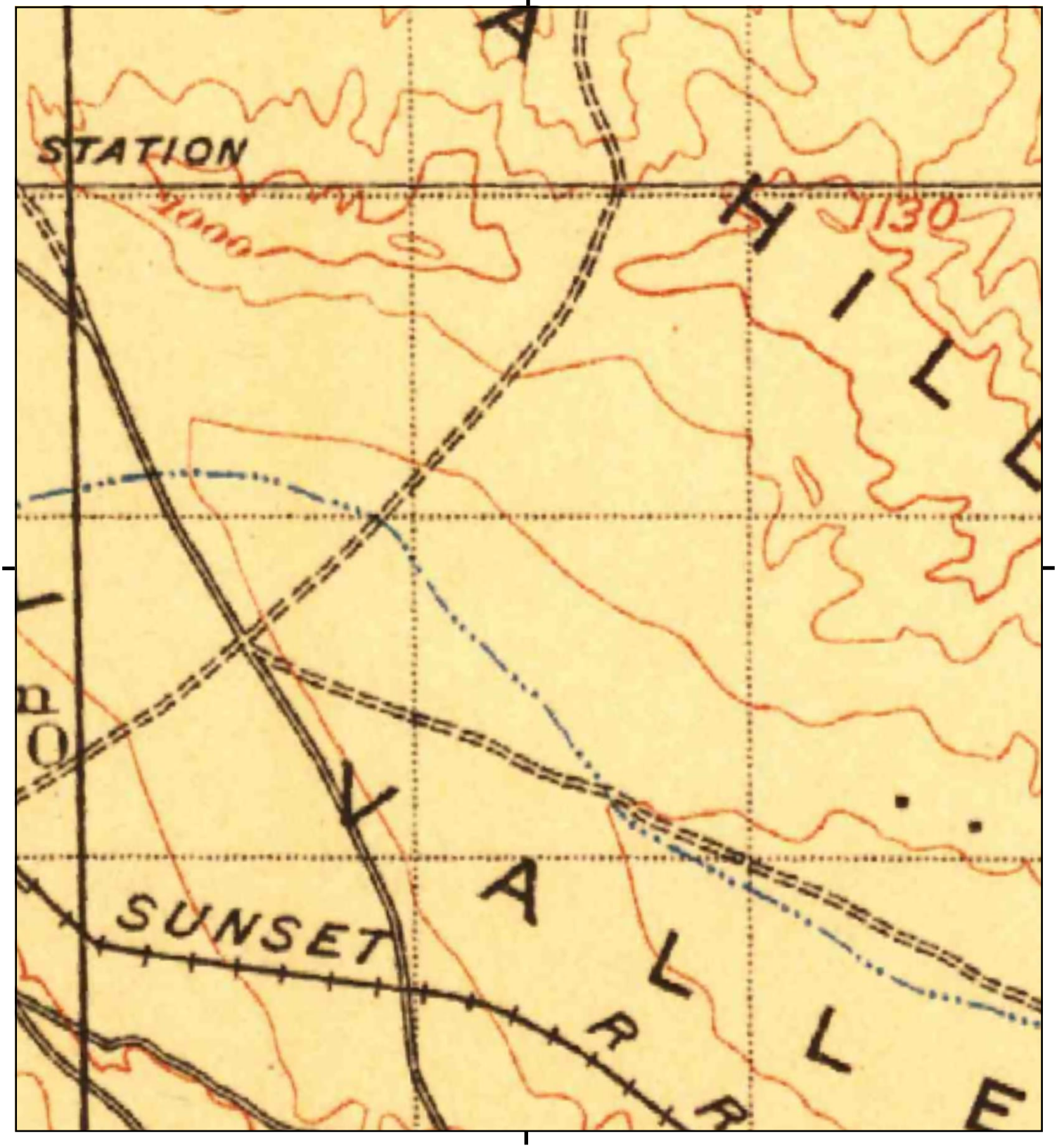
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buena Vista Lake, 1912, 30-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buena Vista Lake, 1910, 30-minute

SITE NAME: Gas Company Road
ADDRESS: Gas Company Road
Taft, CA 93268
CLIENT: Engeo Inc.

N

DRAFT

APPENDIX D

ENVIRONMENTAL DATA RESOURCES, INC.

Aerial Photo Decade Package

Gas Company Road

Gas Company Road

Taft, CA 93268

Inquiry Number: 5811484.8

October 01, 2019

The EDR Aerial Photo Decade Package

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

EDR Aerial Photo Decade Package

10/01/19

Site Name:

Gas Company Road
Gas Company Road
Taft, CA 93268
EDR Inquiry # 5811484.8

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Katherina Zecca

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1994	1"=500'	Acquisition Date: May 10, 1994	USGS/DOQQ
1984	1"=500'	Flight Date: June 09, 1984	USDA
1976	1"=500'	Flight Date: July 01, 1976	USGS
1973	1"=500'	Flight Date: May 01, 1973	USDA
1968	1"=500'	Flight Date: December 27, 1968	USGS
1956	1"=500'	Flight Date: August 24, 1956	USDA
1952	1"=500'	Flight Date: August 14, 1952	USGS

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INQUIRY #: 5811484.8

YEAR: 2016

= 500'

N

EDR

INQUIRY #: 5811484.8

YEAR: 2012

= 500'

N

EDR

INQUIRY #: 5811484.8

YEAR: 2009

= 500'

N

EDR

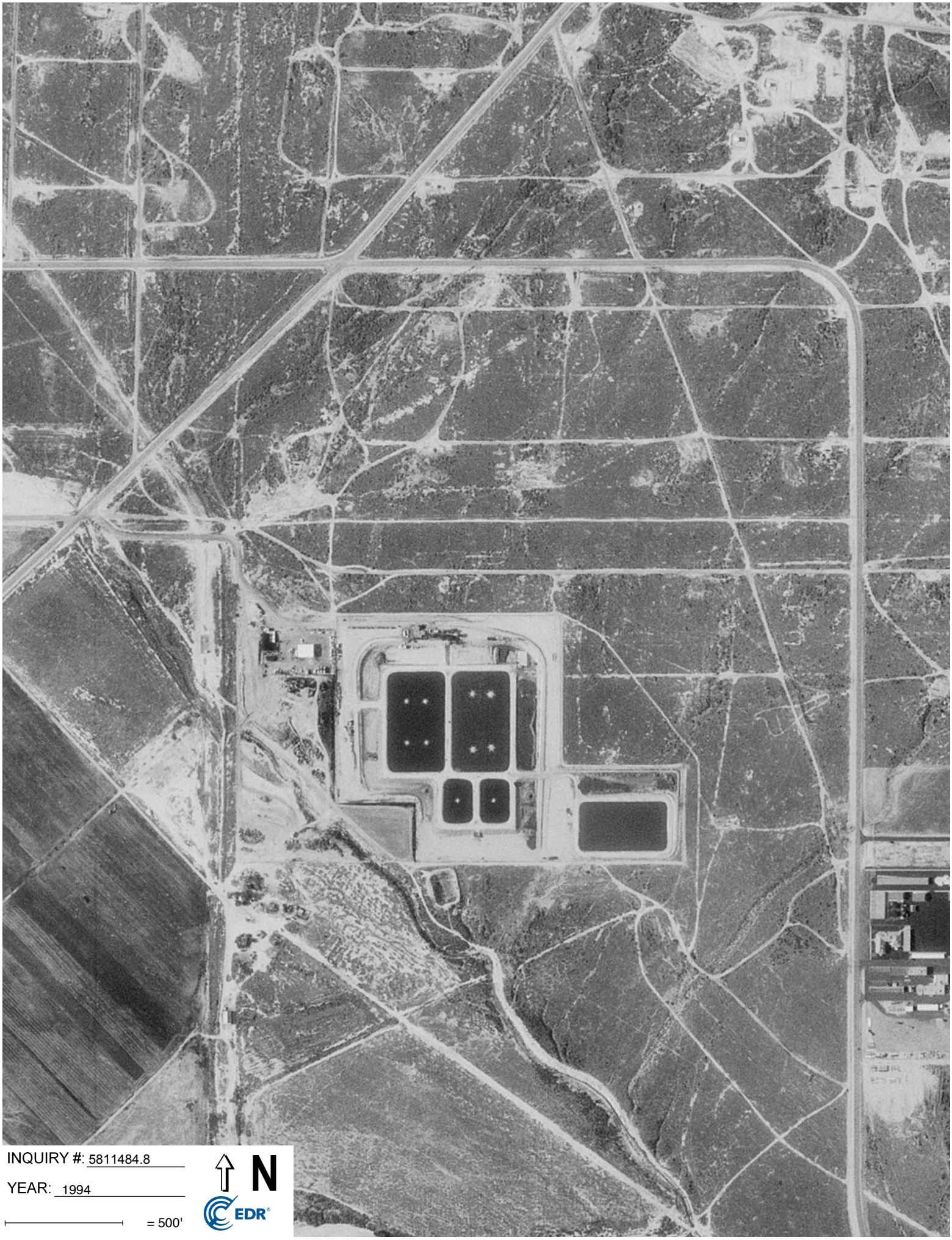
INQUIRY #: 5811484.8

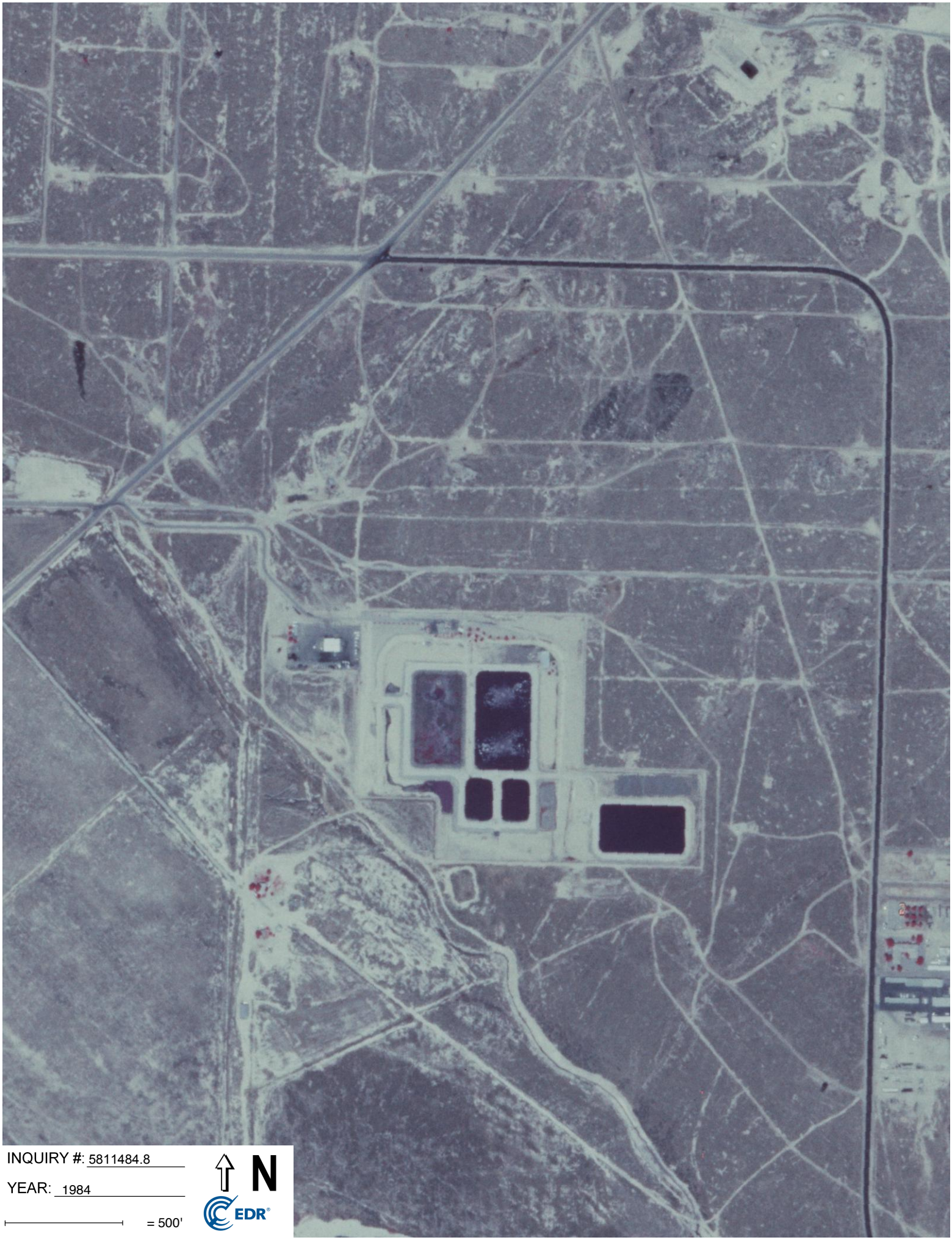
YEAR: 2006

= 500'

N

EDR


INQUIRY #: 5811484.8
YEAR: 1994
= 500'
N
EDR



INQUIRY #: 5811484.8

YEAR: 1984

= 500'

N

EDR

INQUIRY #: 5811484.8

YEAR: 1976

= 500'

N

EDR

INQUIRY #: 5811484.8

YEAR: 1973

= 500'

N

EDR

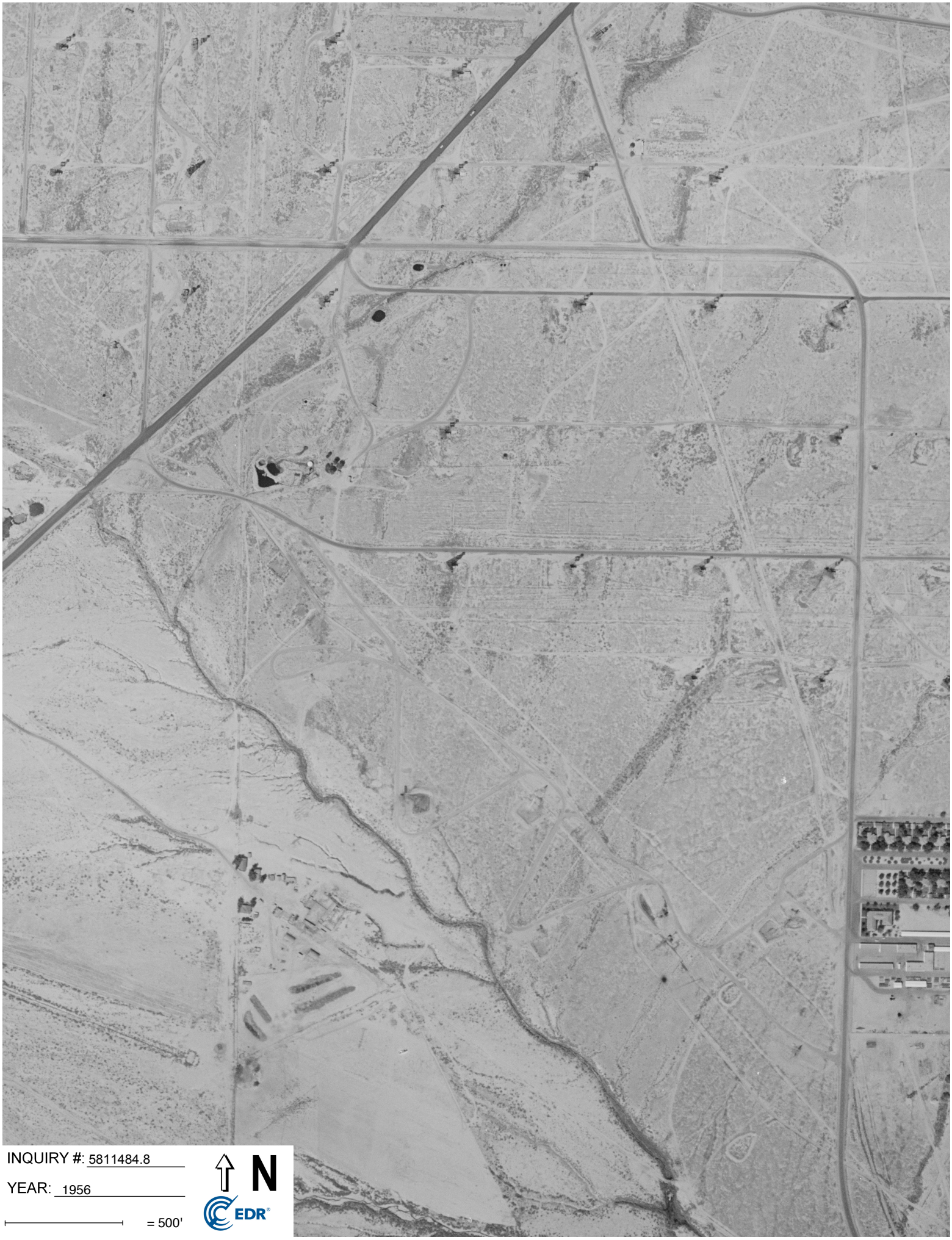
INQUIRY #: 5811484.8

YEAR: 1968

= 500'

N

EDR



INQUIRY #: 5811484.8

YEAR: 1956

= 500'

N

EDR

INQUIRY #: 5811484.8

YEAR: 1952

= 500'

N

EDR

DRAFT

APPENDIX E

FIDELITY NATIONAL TITLE COMPANY

Preliminary Title Report

FIDELITY NATIONAL TITLE GROUP
FNTG Western Region Energy Services
Chicago Title • Commonwealth • Fidelity National Title • Ticor Title

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

Issuing Policies of Fidelity National Title Insurance Company

Title Officer: Mitch LaRiva
Escrow Officer: Major Accounts OAC

Order No.: 997-**30016548**-ML6

TO:

ZGlobal
604 Sutter Street, Suite 250
Folsom, CA 95630

ATTN: .**Jamie Nagel**
YOUR REFERENCE: **Kings County**

PROPERTY ADDRESS: **Vacant Land, Taft, CA**

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein, ***Fidelity National Title Company*** *hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.*

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a Florida Corporation.

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

Countersigned by:

Authorized Signature

FIDELITY NATIONAL TITLE GROUP
FNTG Western Region
Energy Services
Chicago Title • Commonwealth • Fidelity National Title • Ticor Title

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

PRELIMINARY REPORT

EFFECTIVE DATE: **July 20, 2018 at 7:30 a.m.**

ORDER NO.: 997-30016548-ML6

The form of policy or policies of title insurance contemplated by this report is:

ALTA Standard Owners Policy (6-17-06)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A FEE

2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   WESTSIDE ECONOMIC DEVELOPMENT CO., LLC, A California Limited Liability Company

3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

   See Exhibit A attached hereto and made a part hereof.

EXHIBIT A

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF TAFT IN THE COUNTY OF KERN, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTH HALF OF SECTION 17, TOWNSHIP 32 SOUTH, RANGE 24 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TAFT, COUNTY OF KERN, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPT THAT PORTION THEREOF CONVEYED TO A.R.M. COMPANY, A PARTNERSHIP, BY DEED RECORDED APRIL 24, 1972 IN BOOK 4667, PAGE 866 OF OFFICIAL RECORDS.

ALSO EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF TAFT, A MUNICIPAL CORPORATION, BY DEED RECORDED MAY 01, 1973 IN BOOK 4783, PAGE 100 OF OFFICIAL RECORDS.

ALSO EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF TAFT, A MUNICIPAL CORPORATION, BY DEED RECORDED APRIL 07, 1978 IN BOOK 5101, PAGE 919 OF OFFICIAL RECORDS.

ALSO EXCEPT THAT PORTION THEREOF CONVEYED TO WEST SIDE MOSQUITO ABATEMENT DISTRICT BY DEED RECORDED JANUARY 09, 1990 IN BOOK 6333, PAGE 1592 OF OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM ALL OIL, GAS AND OTHER MINERALS BELOW THE STRATIGRAPHIC DEPTH EQUIVALENT OF THE P4 POINT AS SHOWN ON THE ELECTRIC LOGS OF WELL #552 IN SECTION 8, WELL #544 IN SECTION 9, AND WELL #525 IN SECTION 10, TOWNSHIP 32 SOUTH, RANGE 24 EAST, AS CONVEYED TO OCCIDENTAL OF ELK HILLS, INC., A DELAWARE CORPORATION, BY MINERAL DEED RECORDED NOVEMBER 12, 1999 AS INSTRUMENT NO. 0199163321 OF OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM ALL OIL, GAS AND OTHER MINERALS FROM THE SURFACE TO THE STRATIGRAPHIC DEPTH EQUIVALENT OF THE P4 POINT AS SHOWN ON THE ELECTRIC LOGS OF WELL #552 IN SECTION 8, WELL #544 IN SECTION 9, AND WELL #525 IN SECTION 10, TOWNSHIP 32 SOUTH, RANGE 24 EAST, AS CONVEYED TO BUENA VISTA HILLS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, BY DEED RECORDED JANUARY 26, 2000 AS INSTRUMENT NO. 0200009824 OF OFFICIAL RECORDS.

ALSO EXCEPT THAT PORTION THEREOF CONVEYED TO CHARLES BEARD AND VIRGIE M. BEARD, TRUSTEES OF THE BEARD FAMILY TRUST DATED DECEMBER 18, 1990, BY DEED RECORDED SEPTEMBER 30, 2008 AS INSTRUMENT NO. 0208154469 OF OFFICIAL RECORDS.

SAID LAND IS FURTHER DESCRIBED AS PARCEL 3 OF PARCEL MAP NO. 11759, AS SHOWN ON A MAP FILED IN BOOK 56, PAGES 173 THROUGH 175, INCLUSIVE OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF KERN COUNTY, CALIFORNIA.

ALSO EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF TAFT, A MUNICIPAL CORPORATION, BY DEED RECORDED JUNE 15, 2016 AS INSTRUMENT NO. 000216077329 OF OFFICIAL RECORDS.

APN: 220-240-26-00

EXCEPTIONS

AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:

A. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2018-2019.

B. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

C. Said land lies within the boundaries of West Kern Water District and is subject to any and all easements thereof.

1. Water rights, claims or title to water, whether or not disclosed by the public records.

2. An agreement dated October 01, 1935, entitled "Plan for Cooperative Development of Buena Vista Hills Oil and Gas Field", executed by Standard Oil Company of California, a corporation, et al., recorded September 23, 1936 in Book 722, Page 352 of Official Records, and as a part of an instrument executed by the United States of America, et al., recorded in Book 731, Page 5 of Official Records.

   No representation is made as to the present participants to said agreement or matters affecting the rights or interests of said participants arising out of or occasioned by said agreement.

   Reference is hereby made to said document for full particulars.

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The County of Kern
Purpose:	Public highway
Recording Date:	February 27, 1939
Recording No:	Book 852, Page 424 of Official Records
Affects:	A portion of said land as more particularly described in said document

4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The Texas Company
Purpose:	A telephone line
Recording Date:	July 13, 1948
Recording No:	Book 1545, Page 40 of Official Records
Affects:	A portion of said land as more particularly described in said document

5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	West Kern County Water District
Purpose:	Pipe line
Recording Date:	October 27, 1964
Recording No:	Book 3779, Page 516 of Official Records
Affects:	A portion of said land as more particularly described in said document

EXCEPTIONS
(Continued)

6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Southern California Gas Company
Purpose:	Pipe line
Recording Date:	March 01, 1974
Recording No:	Book 4828, Page 2180 of Official Records
Affects:	A portion of said land as more particularly described in said document

7. The Land described herein is included within a project area of the Redevelopment Agency shown below, and that proceedings for the redevelopment of said project have been instituted under the Redevelopment Law (such redevelopment to proceed only after the adoption of the Redevelopment Plan) as disclosed by a document.

Redevelopment Agency:	Redevelopment Agency of the City of Taft
Recording Date:	July 17, 1986
Recording No:	Book 5895, Page 89 of Official Records

8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Pacific Gas and Electric Company
Purpose:	Poles and appurtenances
Recording Date:	August 18, 1988
Recording No:	Book 6154, Page 684 of Official Records
Affects:	A portion of said land as more particularly described in said document

9. Matters contained in that certain document

Entitled:	Agreement
Recording Date:	September 09, 1993
Recording No:	Book 6905, Page 1592 of Official Records

Reference is hereby made to said document for full particulars.

10. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Chevron Pipe Line Company
Purpose:	Pipe lines for the transportation of oil, petroleum, gas, gasoline, water or other substances
Recording Date:	January 13, 1994
Recording No:	Book 6972, Page 1991 of Official Records

The exact location and extent of said easement is not disclosed of record.

EXCEPTIONS
(Continued)

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Occidental of Elk Hills, Inc.
Purpose:	All ancillary surface rights associated with such ownership are commonly implied under California Law, insofar as they are reasonable and necessary to the exploration, extraction, production, processing, transportation and development of such minerals (including, without limitation, oil, gas and other hydrocarbons) and mineral rights relating thereto, including, without limitation, the right to construct and operate surface facilities and personal property relating thereto, the right to conduct seismic operations and pass-through rights for the drilling and production of wells from the surface of the lands above any of the deep mineral rights through the depths below such lands to any of the deep mineral rights granted hereunder
Recording Date:	November 12, 1999
Recording No:	0199163321 of Official Records

The exact location and extent of said easement is not disclosed of record.

12. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Buena Vista Hills, LLC
Purpose:	All surface rights as are commonly implied under California law, insofar as they are reasonable and necessary to the exploration, extraction, production, processing, transportation and development of such minerals (including oil, gas and other hydrocarbons) and mineral rights relating thereto, including, without limitation, the right to construct and operate surface facilities and personal property relating thereto and the right to conduct seismic operations
Recording Date:	January 26, 2000
Recording No:	0200009824 of Official Records

The exact location and extent of said easement is not disclosed of record.

13. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose:	To use the subsurface, sometimes referred to as the “pore space”, below a depth of 10 feet for disposal of waste water
Recording Date:	March 11, 2005
Recording No:	0205059910 of Official Records

The exact location and extent of said easement is not disclosed of record.

14. Any rights, interests or claims which may exist or arise by reason of the following matters disclosed by Parcel Map No. 11759:

a. Southern California Gas Company pipelines situated on the easterly portion of said land.
b. A West Kern Valley Water District 45 water line situated on the southeasterly portion of said land.

EXCEPTIONS
(Continued)

The effect of an Easement Quitclaim Deed

From:	West Kern Water District, successor in interest to Western Water Company, a California county water district organized and existing under and by virtue of the provisions of Division 12 of the Water Code
To:	Charles Beard and Virgie M. Beard, Trustees of the Beard Family Trust
Dated:	February 03, 2010
Recording Date:	March 30, 2010
Recording No.:	0210041464 of Official Records

Note: Being a quitclaim of pipeline right of way easement per agreement dated January 14, 1927.

15. Any rights of the parties in possession of a portion of, or all of, said Land, which rights are not disclosed by the public records.

The Company will require, for review, a full and complete copy of any unrecorded agreement, contract, license and/or lease, together with all supplements, assignments and amendments thereto, before issuing any policy of title insurance without excepting this item from coverage.

The Company reserves the right to except additional items and/or make additional requirements after reviewing said documents.

16. Matters which may be disclosed by an inspection and/or by a correct ALTA/NSPS Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.

17. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

PLEASE REFER TO THE "INFORMATIONAL NOTES" AND "REQUIREMENTS" SECTIONS WHICH FOLLOW FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION.

END OF EXCEPTIONS

REQUIREMENTS SECTION

1. Unrecorded matters which may be disclosed by an Owner's Affidavit or Declaration. A form of the Owner's Affidavit/Declaration is attached to this Preliminary Report/Commitment. This Affidavit/Declaration is to be completed by the record owner of the land and submitted for review prior to the closing of this transaction. Your prompt attention to this requirement will help avoid delays in the closing of this transaction. Thank you.

   The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit/Declaration.

2. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

   Limited Liability Company: Westside Economic Development Co., LLC

   a) A copy of its operating agreement, if any, and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

   b) If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.

   c) If the Limited Liability Company is member-managed, a full and complete current list of members certified by the appropriate manager or member.

   d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity is currently domiciled.

   e) If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

   f) If Limited Liability Company is a Single Member Entity, a Statement of Information for the Single Member will be required.

   g) Each member and manager of the LLC without an Operating Agreement must execute in the presence of a notary public the Certificate of California LLC (Without an Operating Agreement) Status and Authority form.

3. The Company will require an ALTA/NSPS LAND TITLE SURVEY. If the owner of the Land the subject of this transaction is in possession of a current ALTA/NSPS LAND TITLE SURVEY, the Company will require that said survey be submitted for review and approval; otherwise, a new survey, satisfactory to the Company, must be prepared by a licensed land surveyor and supplied to the Company prior to the close of escrow.

   The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

4. This transaction requires high liability approval prior to close of escrow together with an inspection of the subject property.

   Please advise title department with an estimated date that your transaction will close so we can schedule the necessary approvals and inspections.

END OF REQUIREMENTS

INFORMATIONAL NOTES SECTION

1. Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.:	220-240-26-00
Fiscal Year:	2017-2018
1st Installment:	$236.68
2nd Installment:	$236.67
Exemption:	$0.00
Code Area:	004-006

2. The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance coverage.

3. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

4. Pursuant to Government Code Section 27388.1, as amended and effective as of 1-1-2018, a Documentary Transfer Tax (DTT) Affidavit may be required to be completed and submitted with each document when DTT is being paid or when an exemption is being claimed from paying the tax. If a governmental agency is a party to the document, the form will not be required. DTT Affidavits may be available at a Tax Assessor-County Clerk-Recorder.

5. Due to the special requirements of SB 50 (California Public Resources Code Section 8560 et seq.), any transaction that includes the conveyance of title by an agency of the United States must be approved in advance by the Company's State Counsel, Regional Counsel, or one of their designees.

6. There are NO conveyances affecting said Land recorded within 24 months of the date of this report.

END OF INFORMATIONAL NOTES

Mitch LaRiva/ah1

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened**. DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

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FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected
We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:
- contact information (*e.g.,* name, address, phone number, email address);
- demographic information (*e.g.,* date of birth, gender, marital status);
- identity information (*e.g.,* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.,* loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or mobile device:
- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website

How Personal Information is Collected
We may collect Personal Information about you from:
- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected
If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics
Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information
FNF uses Personal Information for three main purposes:
- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and third parties' products and services, jointly or independently.

When Information Is Disclosed
We may make disclosures of your Personal Information and Browsing Information in the following circumstances:
- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or

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- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see "**Choices With Your Information**" to learn the disclosures you can restrict.

Security of Your Information
We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information
If you do not want FNF to share your information with our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children
The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18).We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users
FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans
Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except (1) as required or authorized by contract with the mortgage loan servicer or lender, or (2) as required by law or in the good-faith belief that such disclosure is necessary to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes
By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The revised Privacy Notice, showing the new revision date, will be posted on the FNF Website. Each time you provide information to us following any amendment of this Privacy Notice, your provision of information to us will signify your assent to and acceptance of the terms of the revised Privacy Notice for all previously collected information and information

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collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us
If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests via email to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

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Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries ("FNF") must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer's right to be charged the field rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for each discount. These discounts only apply to transaction involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

FNF Underwritten Title Company
FNTC - Fidelity National Title Company
FNTCCA –Fidelity National Title Company of California

FNF Underwriter
FNTIC - Fidelity National Title Insurance Company

Available Discounts

CREDIT FOR PRELIMINARY REPORTS AND/OR COMMITMENTS ON SUBSEQUENT POLICIES (FNTIC)
Where no major change in the title has occurred since the issuance of the original report or commitment, the order may be reopened within 12 or 36 months and all or a portion of the charge previously paid for the report or commitment may be credited on a subsequent policy charge.

DISASTER LOANS (FNTIC)
The charge for a lender's Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within 24 months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be 50% of the appropriate title insurance rate.

CHURCHES OR CHARITABLE NON-PROFIT ORGANIZATIONS (FNTIC)
On properties used as a church or for charitable purposes within the scope of the normal activities of such entities, provided said charge is normally the church's obligation the charge for an owner's policy shall be 50% to 70% of the appropriate title insurance rate, depending on the type of coverage selected. The charge for a lender's policy shall be 40% to 50% of the appropriate title insurance rate, depending on the type of coverage selected.

ATTACHMENT ONE

CALIFORNIA LAND TITLE ASSOCIATION

STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;

d. improvements on the Land;
e. land division; and
f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% % of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1.00% % of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 5,000.00

2006 ALTA LOAN POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

(Except as provided in Schedule B - Part II,(t(or T)his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

(PART I

(The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:)

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
      (i) the occupancy, use, or enjoyment of the Land;
      (ii) the character, dimensions, or location of any improvement erected on the Land;
      (iii) the subdivision of land; or
      (iv) environmental protection;
      or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or

(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.

4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of: (The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.
7. (Variable exceptions such as taxes, easements, CC&R's, etc. shown here.)

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (04-02-15)

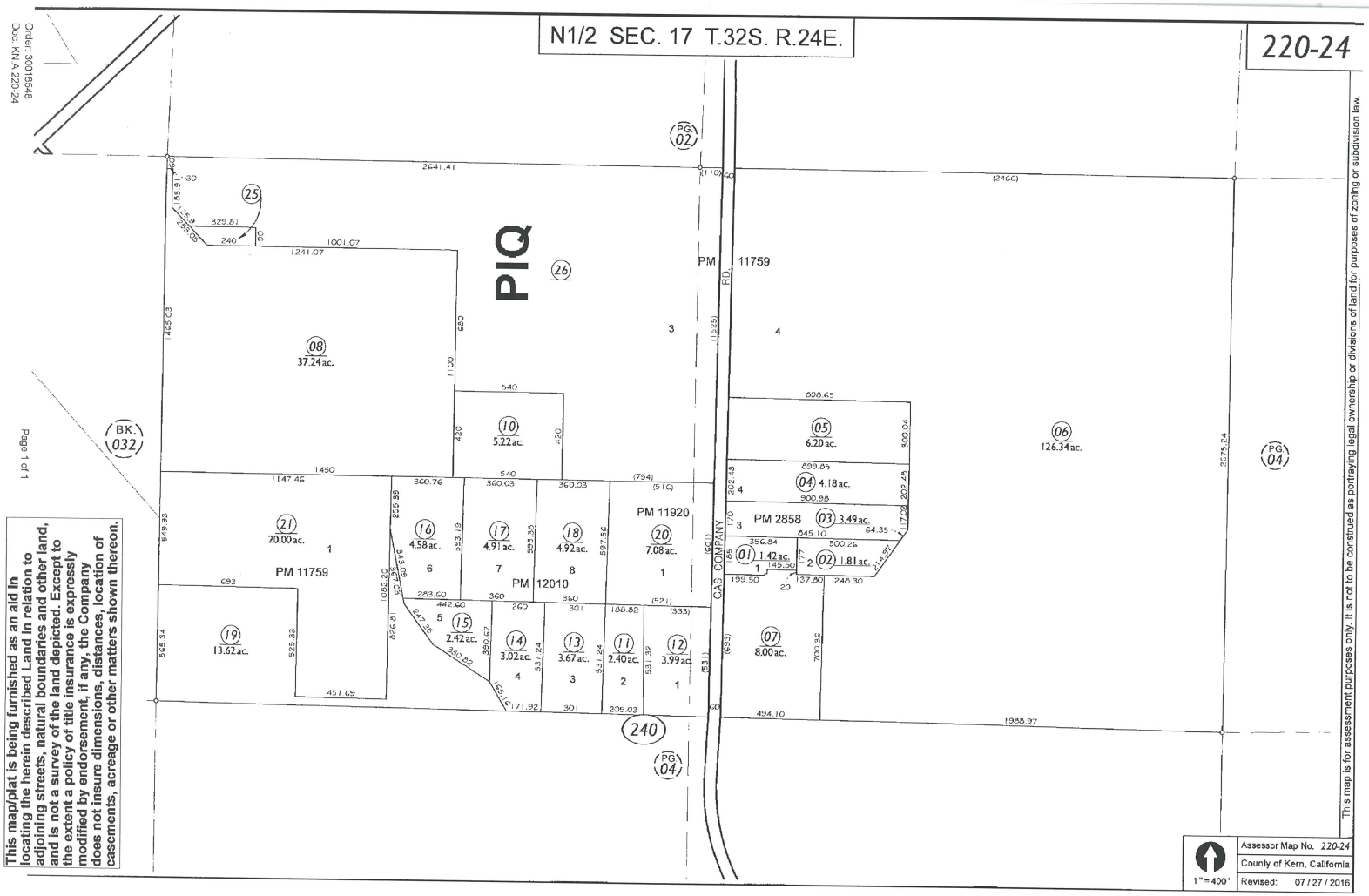
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.

8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

Order: 30016548
Doc: KN:A 220-24



OWNER'S DECLARATION

Escrow No.: 30016548-997-MAT-ML6
Property Address: Vacant Land
Taft, CA 93268

The undersigned hereby declares as follows:

1. (Fill in the applicable paragraph and strike the other)
   a. Declarant ("Owner") is the owner or lessee, as the case may be, of certain premises located at Vacant Land, Taft, CA 93268, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
   b. Declarant is the _____ of _____ ("Owner"), which is the owner or lessee, as the case may be, of certain premises located at Vacant Land, Taft, CA 93268, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
2. (Fill in the applicable paragraph and strike the other)
   a. During the period of six months immediately preceding the date of this declaration no work has been done, no surveys or architectural or engineering plans have been prepared, and no materials have been furnished in connection with the erection, equipment, repair, protection or removal of any building or other structure on the Land or in connection with the improvement of the Land in any manner whatsoever.
   b. During the period of six months immediately preceding the date of this declaration certain work has been done and materials furnished in connection with _____ upon the Land in the approximate total sum of $_____, but no work whatever remains to be done and no materials remain to be furnished to complete the construction in full compliance with the plans and specifications, nor are there any unpaid bills incurred for labor and materials used in making such improvements or repairs upon the Land, or for the services of architects, surveyors or engineers, except as follows: _____. Owner, by the undersigned Declarant, agrees to and does hereby indemnify and hold harmless Fidelity National Title Company against any and all claims arising therefrom.
3. Owner has not previously conveyed the Land; is not a debtor in bankruptcy (and if a partnership, the general partner thereof is not a debtor in bankruptcy); and has not received notice of any pending court action affecting the title to the Land.
4. Except as shown in the above-referenced Preliminary Report/Commitment, there are no unpaid or unsatisfied mortgages, deeds of trust, Uniform Commercial Code financing statements, regular assessments, special assessments, periodic assessments or any assessment from any source, claims of lien, special assessments, or taxes that constitute a lien against the Land or that affect the Land but have not been recorded in the public records. There are no violations of the covenants, conditions and restrictions as shown in the above-referenced Preliminary Report/Commitment.
5. The Land is currently in use as _____; _____ occupy/occupies the Land; and the following are all of the leases or other occupancy rights affecting the Land:

   _____
6. There are no other persons or entities that assert an ownership interest in the Land, nor are there unrecorded easements, claims of easement, or boundary disputes that affect the Land.
7. There are no outstanding options to purchase or rights of first refusal affecting the Land.
8. Between the most recent Effective Date of the above-referenced Preliminary Report/Commitment and the date of recording of the Insured Instrument(s), Owner has not taken or allowed, and will not take or allow, any action or inaction to encumber or otherwise affect title to the Land.

This declaration is made with the intention that Fidelity National Title Company (the "Company") and its policy issuing agents will rely upon it in issuing their title insurance policies and endorsements. Owner, by the undersigned Declarant, agrees to indemnify the Company against loss or damage (including attorneys fees, expenses, and costs) incurred by the Company as a result of any untrue statement made herein.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on _____ at _____.

Signature: _____

FIDELITY NATIONAL TITLE GROUP
FNTG Western Region
Energy Services
Chicago Title • Commonwealth • Fidelity National Title • Ticor Title

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

Issuing Policies of Fidelity National Title Insurance Company

Title Officer: Mitch LaRiva
Escrow Officer: Major Accounts OAC

Order No.: 997-**30016550**-ML6

TO:

ZGlobal
604 Sutter Street, Suite 250
Folsom, CA 95630

ATTN: .**Jamie Nagel**
YOUR REFERENCE: **Kern 220-300-14-00**

PROPERTY ADDRESS: **Vacant Land, Taft, CA**

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein, ***Fidelity National Title Company*** *hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.*

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a Florida Corporation.

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

Countersigned by:

Authorized Signature

FIDELITY NATIONAL TITLE GROUP
FNTG Western Region Energy Services
Chicago Title • Commonwealth • Fidelity National Title • Ticor Title

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

PRELIMINARY REPORT

EFFECTIVE DATE: **July 20, 2018 at 7:30 a.m.**

ORDER NO.: 997-30016550-ML6

The form of policy or policies of title insurance contemplated by this report is:

ALTA Standard Owners Policy (6-17-06)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A FEE

2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   WEST SIDE ECONOMIC DEVELOPMENT COMPANY, LLC

3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

   See Exhibit A attached hereto and made a part hereof.

EXHIBIT A

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF TAFT IN THE COUNTY OF KERN, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 4 OF PARCEL MAP NO. 11694, IN THE CITY OF TAFT, COUNTY OF KERN, STATE OF CALIFORNIA, BEING A DIVISION OVER A PORTION OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 32 SOUTH, RANGE 24 EAST, M.D.M., AS RECORDED ON MAY 05, 2010, IN BOOK 58, PAGES 36 THROUGH 38 OF OFFICIAL RECORDS OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM ALL OIL, GAS AND OTHER MINERALS BELOW THE STRATIGRAPHIC DEPTH EQUIVALENT OF THE P4 POINT AS SHOWN ON THE ELECTRIC LOGS OF WELL #552 IN SECTION 8, WELL #544 IN SECTION 9, AND WELL #525 IN SECTION 10, TOWNSHIP 32 SOUTH, RANGE 24 EAST, AS CONVEYED TO OCCIDENTAL OF ELK HILLS, INC., A DELAWARE CORPORATION, BY MINERAL DEED RECORDED NOVEMBER 12, 1999 AS INSTRUMENT NO. 0199163321 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM ALL OIL, GAS AND OTHER MINERALS FROM THE SURFACE TO THE STRATIGRAPHIC DEPTH EQUIVALENT OF THE P4 POINT AS SHOWN ON THE ELECTRIC LOGS OF WELL #552 IN SECTION 8, WELL #544 IN SECTION 9, AND WELL #525 IN SECTION 10, TOWNSHIP 32 SOUTH, RANGE 24 EAST, AS CONVEYED TO BUENA VISTA HILLS, LLC, BY DEED RECORDED JANUARY 26, 2000 AS INSTRUMENT NO. 0200009824 OF OFFICIAL RECORDS.

APN: 220-300-14-00

EXCEPTIONS

AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:

A. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2018-2019.

B. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

1. Said land lies within the boundaries of West Kern Water District and is subject to any and all assessments thereof.

2. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Purpose:	Pipe lines and telephone lines
Recording No:	Book 25, Page 10 of Leases

The exact location and extent of said easement is not disclosed of record.

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The County of Kern
Purpose:	Public road
Recording Date:	August 06, 1920
Recording No:	Book 359, Page 70 of Deeds
Affects:	A portion of said land as more particularly described in said document

4. The exceptions and reservations contained in that certain deed from Southern Pacific Land Company to Pacific Oil Company, recorded December 20, 1920 in Book 361, Page 136 of Deeds.

Reference is hereby made to said document for full particulars.

5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The County of Kern
Purpose:	Public highway
Recording Date:	September 29, 1926
Recording No:	Book 147, Page 288 of Official Records
Affects:	A portion of said land as more particularly described in said document

6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The City of Taft
Purpose:	Pipe line
Recording Date:	October 22, 1951
Recording No:	Book 1857, Page 404 of Official Records
Affects:	A portion of said land as more particularly described in said document

EXCEPTIONS
(Continued)

7. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Southern California Gas Company
Purpose:	Cathodic protection system
Recording Date:	December 10, 1958
Recording No:	Book 3048, Page 421 of Official Records
Affects:	A portion of said land as more particularly described in said document

8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The City of Taft
Purpose:	Public highway and sewer line
Recording Date:	May 01, 1973
Recording No:	Book 4783, Page 104 of Official Records
Affects:	A portion of said land as more particularly described in said document

9. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	San Joaquin Light and Power Company
Purpose:	A power line, per agreement dated July 26, 1937
Recording Date:	October 31, 1980
Recording No:	Book 5327, Page 586 of Official Records

The exact location and extent of said easement is not disclosed of record.

10. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	San Joaquin Light and Power Corp. (now Pacific Gas and Electric Co.)
Purpose:	Power line, per agreement dated May 24, 1933
Disclosed by:	Grant Deed
Recording Date:	July 01, 1985
Recording No:	Book 5774, Page 935 of Official Records

The exact location and extent of said easement is not disclosed of record.

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	San Joaquin Light and Power Corp. (now Pacific Gas and Electric Co.)
Purpose:	Power lines, per agreement dated October 19, 1937
Disclosed by:	Grant Deed
Recording Date:	July 01, 1985
Recording No:	Book 5774, Page 935 of Official Records
Affects:	A portion of said land as more particularly described in said document

12. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Mojave Pipeline Company, a general partnership, and Kern River Gas Transmission Company, a general partnership, as tenants in common
Purpose:	A pipe line for the transportation of gas
Recording Date:	January 15, 1991
Recording No:	Book 6478, Page 0161 of Official Records
Affects:	A portion of said land as more particularly described in said document

EXCEPTIONS
(Continued)

13. The terms, covenants, conditions and provisions contained in an instrument,

Dated:	December 14, 1990
Executed by:	Chevron U.S.A. Inc., a corporation, as "Grantor", and Mojave Pipeline Company, a general partnership, and Kern River Gas Transmission Company, a general partnership, as "Grantee"
Recording Date:	January 15, 1991
Recording No:	Book 6478, Page 0161 of Official Records

Reference is hereby made to said document for full particulars.

14. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Occidental of Elk Hills, Inc.
Purpose:	Ancillary surface rights associated with drilling and production of wells
Recording Date:	November 12, 1999
Recording No:	0199163321 of Official Records

The exact location and extent of said easement is not disclosed of record.

15. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Buena Vista Hills, LLC
Purpose:	Surface rights
Recording Date:	January 26, 2000
Recording No:	0200009824 of Official Records
Affects:	A portion of said land as more particularly described in said document

16. Matters contained in that certain document

Entitled:	Corporation Grant Deed
Recording Date:	March 11, 2005
Recording No:	0205059910 of Official Records

Reference is hereby made to said document for full particulars.

17. Matters contained in that certain document

Entitled:	Declaration of Restrictive Water Covenant
Recording Date:	May 09, 2009
Recording No:	0209063906 of Official Records

Reference is hereby made to said document for full particulars.

18. Recitals as shown on that certain Parcel Map No. 11694, which among other things recite:

The California Gas Company pipeline and cathodic protection facilities shall be protected in place during any and all construction activities.

Reference is hereby made to said document for full particulars.

EXCEPTIONS
(Continued)

19. Any rights of the parties in possession of a portion of, or all of, said Land, which rights are not disclosed by the public records.

    The Company will require, for review, a full and complete copy of any unrecorded agreement, contract, license and/or lease, together with all supplements, assignments and amendments thereto, before issuing any policy of title insurance without excepting this item from coverage.

    The Company reserves the right to except additional items and/or make additional requirements after reviewing said documents.

20. Matters which may be disclosed by an inspection and/or by a correct ALTA/NSPS Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.

21. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

PLEASE REFER TO THE "INFORMATIONAL NOTES" AND "REQUIREMENTS" SECTIONS WHICH FOLLOW FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION.

END OF EXCEPTIONS

REQUIREMENTS SECTION

1. Unrecorded matters which may be disclosed by an Owner's Affidavit or Declaration. A form of the Owner's Affidavit/Declaration is attached to this Preliminary Report/Commitment. This Affidavit/Declaration is to be completed by the record owner of the land and submitted for review prior to the closing of this transaction. Your prompt attention to this requirement will help avoid delays in the closing of this transaction. Thank you.

   The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit/Declaration.

2. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

   Limited Liability Company: West Side Economic Development Company, LLC

   a) A copy of its operating agreement, if any, and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

   b) If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.

   c) If the Limited Liability Company is member-managed, a full and complete current list of members certified by the appropriate manager or member.

   d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity is currently domiciled.

   e) If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

   f) If Limited Liability Company is a Single Member Entity, a Statement of Information for the Single Member will be required.

   g) Each member and manager of the LLC without an Operating Agreement must execute in the presence of a notary public the Certificate of California LLC (Without an Operating Agreement) Status and Authority form.

3. The Company will require an ALTA/NSPS LAND TITLE SURVEY. If the owner of the Land the subject of this transaction is in possession of a current ALTA/NSPS LAND TITLE SURVEY, the Company will require that said survey be submitted for review and approval; otherwise, a new survey, satisfactory to the Company, must be prepared by a licensed land surveyor and supplied to the Company prior to the close of escrow.

   The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

4. This transaction requires high liability approval prior to close of escrow together with an inspection of the subject property.

   Please advise title department with an estimated date that your transaction will close so we can schedule the necessary approvals and inspections.

END OF REQUIREMENTS

INFORMATIONAL NOTES SECTION

1. Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.:	220-300-14-00
Fiscal Year:	2017-2018
1st Installment:	$94.42
2nd Installment:	$94.41
Exemption:	$0.00
Code Area:	004-016

2. The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance coverage.

3. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

4. Pursuant to Government Code Section 27388.1, as amended and effective as of 1-1-2018, a Documentary Transfer Tax (DTT) Affidavit may be required to be completed and submitted with each document when DTT is being paid or when an exemption is being claimed from paying the tax. If a governmental agency is a party to the document, the form will not be required. DTT Affidavits may be available at a Tax Assessor-County Clerk-Recorder.

5. Due to the special requirements of SB 50 (California Public Resources Code Section 8560 et seq.), any transaction that includes the conveyance of title by an agency of the United States must be approved in advance by the Company's State Counsel, Regional Counsel, or one of their designees.

6. There are NO conveyances affecting said Land recorded within 24 months of the date of this report.

END OF INFORMATIONAL NOTES

Mitch LaRiva/ah1

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened**. DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

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FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected
We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (*e.g.,* name, address, phone number, email address);
- demographic information (*e.g.,* date of birth, gender, marital status);
- identity information (*e.g.,* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.,* loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or mobile device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website

How Personal Information is Collected
We may collect Personal Information about you from:

- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected
If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics
Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information
FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and third parties' products and services, jointly or independently.

When Information Is Disclosed
We may make disclosures of your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or

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- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see "**Choices With Your Information**" to learn the disclosures you can restrict.

Security of Your Information
We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information
If you do not want FNF to share your information with our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children
The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18).We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users
FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans
Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except (1) as required or authorized by contract with the mortgage loan servicer or lender, or (2) as required by law or in the good-faith belief that such disclosure is necessary to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes
By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The revised Privacy Notice, showing the new revision date, will be posted on the FNF Website. Each time you provide information to us following any amendment of this Privacy Notice, your provision of information to us will signify your assent to and acceptance of the terms of the revised Privacy Notice for all previously collected information and information

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collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us
If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests via email to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

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Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries ("FNF") must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer's right to be charged the field rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for each discount. These discounts only apply to transaction involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

FNF Underwritten Title Company
FNTC - Fidelity National Title Company
FNTCCA –Fidelity National Title Company of California

FNF Underwriter
FNTIC - Fidelity National Title Insurance Company

Available Discounts

CREDIT FOR PRELIMINARY REPORTS AND/OR COMMITMENTS ON SUBSEQUENT POLICIES (FNTIC)
Where no major change in the title has occurred since the issuance of the original report or commitment, the order may be reopened within 12 or 36 months and all or a portion of the charge previously paid for the report or commitment may be credited on a subsequent policy charge.

DISASTER LOANS (FNTIC)
The charge for a lender's Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within 24 months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be 50% of the appropriate title insurance rate.

CHURCHES OR CHARITABLE NON-PROFIT ORGANIZATIONS (FNTIC)
On properties used as a church or for charitable purposes within the scope of the normal activities of such entities, provided said charge is normally the church's obligation the charge for an owner's policy shall be 50% to 70% of the appropriate title insurance rate, depending on the type of coverage selected. The charge for a lender's policy shall be 40% to 50% of the appropriate title insurance rate, depending on the type of coverage selected.

ATTACHMENT ONE

CALIFORNIA LAND TITLE ASSOCIATION

STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;

d. improvements on the Land;
e. land division; and
f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% % of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1.00% % of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 5,000.00

2006 ALTA LOAN POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

(Except as provided in Schedule B - Part II,(t(or T)his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

(PART I

(The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:)

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
      (i) the occupancy, use, or enjoyment of the Land;
      (ii) the character, dimensions, or location of any improvement erected on the Land;
      (iii) the subdivision of land; or
      (iv) environmental protection;
      or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or

(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.

4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of: (The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.
7. (Variable exceptions such as taxes, easements, CC&R's, etc. shown here.)

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (04-02-15)

EXCLUSIONS FROM COVERAGE

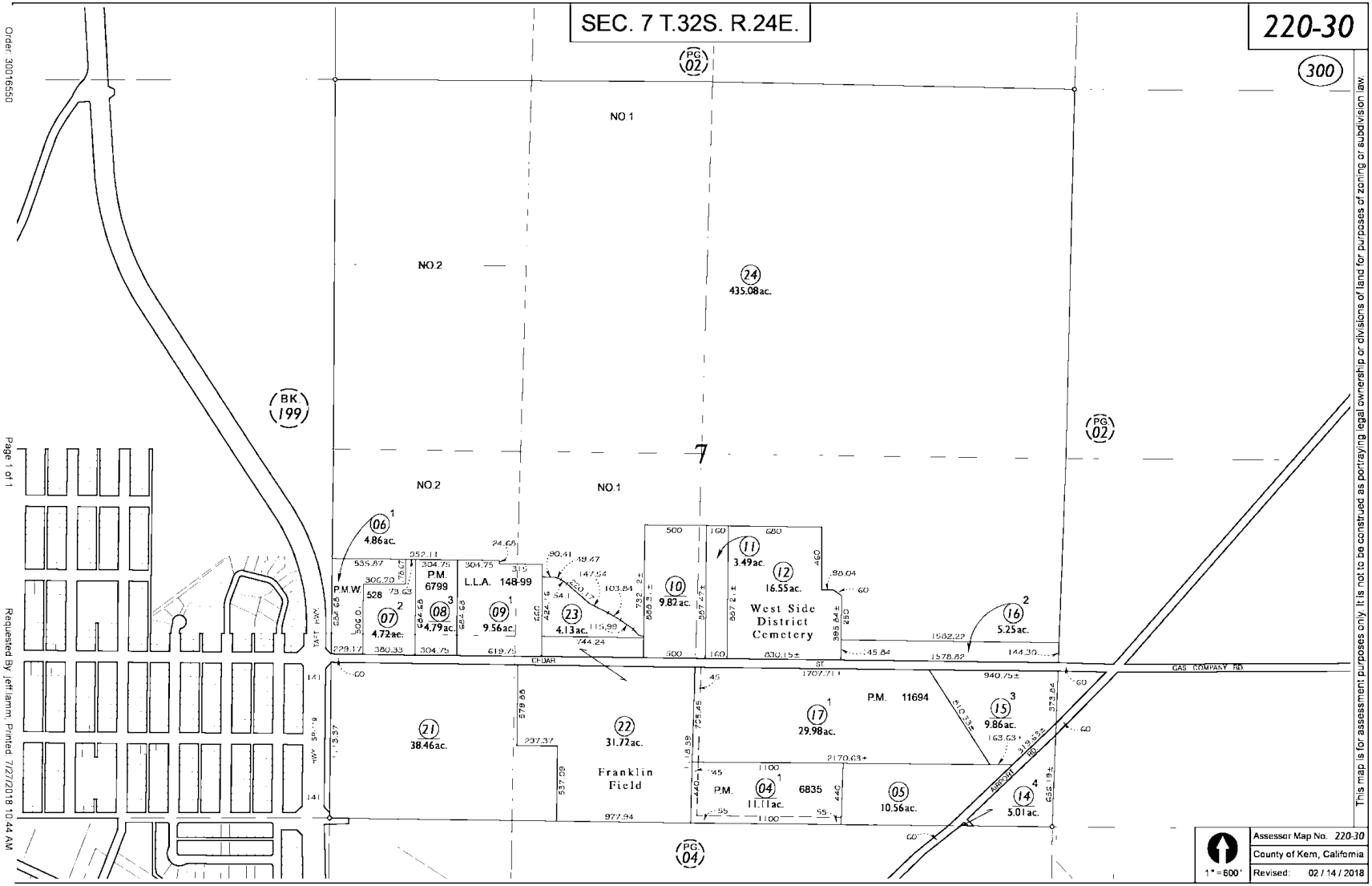
The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.

8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

Order: 30016550
Doc: KN:A 220.30

Requested By: jeff lamm, Printed: 7/27/2018 10:44 AM



This map is for assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

OWNER'S DECLARATION

Escrow No.: 30016550-997-MAT-ML6
Property Address: Vacant Land
Taft, CA 93268

The undersigned hereby declares as follows:

1. (Fill in the applicable paragraph and strike the other)
   a. Declarant ("Owner") is the owner or lessee, as the case may be, of certain premises located at Vacant Land, Taft, CA 93268, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
   b. Declarant is the _____ of _____ ("Owner"), which is the owner or lessee, as the case may be, of certain premises located at Vacant Land, Taft, CA 93268, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
2. (Fill in the applicable paragraph and strike the other)
   a. During the period of six months immediately preceding the date of this declaration no work has been done, no surveys or architectural or engineering plans have been prepared, and no materials have been furnished in connection with the erection, equipment, repair, protection or removal of any building or other structure on the Land or in connection with the improvement of the Land in any manner whatsoever.
   b. During the period of six months immediately preceding the date of this declaration certain work has been done and materials furnished in connection with _____ upon the Land in the approximate total sum of $_____, but no work whatever remains to be done and no materials remain to be furnished to complete the construction in full compliance with the plans and specifications, nor are there any unpaid bills incurred for labor and materials used in making such improvements or repairs upon the Land, or for the services of architects, surveyors or engineers, except as follows: _____. Owner, by the undersigned Declarant, agrees to and does hereby indemnify and hold harmless Fidelity National Title Company against any and all claims arising therefrom.
3. Owner has not previously conveyed the Land; is not a debtor in bankruptcy (and if a partnership, the general partner thereof is not a debtor in bankruptcy); and has not received notice of any pending court action affecting the title to the Land.
4. Except as shown in the above-referenced Preliminary Report/Commitment, there are no unpaid or unsatisfied mortgages, deeds of trust, Uniform Commercial Code financing statements, regular assessments, special assessments, periodic assessments or any assessment from any source, claims of lien, special assessments, or taxes that constitute a lien against the Land or that affect the Land but have not been recorded in the public records. There are no violations of the covenants, conditions and restrictions as shown in the above-referenced Preliminary Report/Commitment.
5. The Land is currently in use as _____; _____ occupy/occupies the Land; and the following are all of the leases or other occupancy rights affecting the Land:

   _____
6. There are no other persons or entities that assert an ownership interest in the Land, nor are there unrecorded easements, claims of easement, or boundary disputes that affect the Land.
7. There are no outstanding options to purchase or rights of first refusal affecting the Land.
8. Between the most recent Effective Date of the above-referenced Preliminary Report/Commitment and the date of recording of the Insured Instrument(s), Owner has not taken or allowed, and will not take or allow, any action or inaction to encumber or otherwise affect title to the Land.

This declaration is made with the intention that Fidelity National Title Company (the "Company") and its policy issuing agents will rely upon it in issuing their title insurance policies and endorsements. Owner, by the undersigned Declarant, agrees to indemnify the Company against loss or damage (including attorneys fees, expenses, and costs) incurred by the Company as a result of any untrue statement made herein.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on _____ at _____.

Signature: _____

DRAFT

APPENDIX F

ENVIRONMENTAL DATA RESOURCES, INC.

City Directory

Gas Company Road
Gas Company Road
Taft, CA 93268

Inquiry Number: 5811484.5
October 02, 2019

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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City Directory Images

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

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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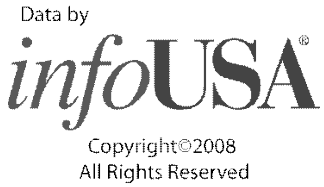

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2007	☑	☐	POLK DIRECTORY CO
2002	☑	☐	POLK DIRECTORY CO
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1987	☑	☐	EDR Digital Archive
1982	☑	☐	EDR Digital Archive
1977	☑	☐	EDR Digital Archive
1972	☐	☐	POLK DIRECTORY CO
1967	☐	☐	POLK DIRECTORY CO
1963	☐	☐	POLK DIRECTORY CO
1959	☐	☐	POLK DIRECTORY CO

FINDINGS

TARGET PROPERTY STREET

Gas Company Road
Taft, CA 93268

Year	*CD Image*	*Source*	
GAS CO RD			
1992	pg A6	EDR Digital Archive	
GAS COMPANY RD			
2014	pg A1	EDR Digital Archive	
2010	pg A2	EDR Digital Archive	
2007	pg A3	POLK DIRECTORY CO	
2002	pg A4	POLK DIRECTORY CO	
1995	pg A5	EDR Digital Archive	
1987	pg A7	EDR Digital Archive	
1982	pg A8	EDR Digital Archive	
1977	pg A9	EDR Digital Archive	
1972	-	POLK DIRECTORY CO	Street not listed in Source
1967	-	POLK DIRECTORY CO	Street not listed in Source
1963	-	POLK DIRECTORY CO	Street not listed in Source
1959	-	POLK DIRECTORY CO	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 2014

7004 KERN COUNTY OF
MOSQUITO ABATEMENT
27680 SOUTHERN CA GAS CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 2010

7004 KERN COUNTY OF
MOSQUITO ABATEMENT
27680 THOMAS ENERY RESEARCH &

Target Street	Cross Street	Source
✓	-	POLK DIRECTORY CO

GAS COMPANY RD 2007

GAS COMPANY RD (TAFT)-FROM 499 CEDAR ST EAST

• ZIP CODE 93268 CAR-RT R001

7004 MOSQUITO ABATEMENT pest control 661-763-3510

Target Street	Cross Street	Source
✓	-	POLK DIRECTORY CO

GAS COMPANY RD 2002

GAS COMPANY RD (TAFT)
• ZIP CODE 93268 CAR-RT R001
7004 MOSQUITO ABATEMENT pest control
.....661-763-3510
+ CEDAR ST INTERSECTS
27680 SOUTHERN CALIFORNIA GAS CO gas companies 661-765-2134
BUSINESSES 2

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 1995

7004 COUNTY OF KERN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS CO RD 1992

27680 VALLEY TRANSMISSION HDQTR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 1987

7004 I T CORPORATION

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 1982

7004 I T CORPORATION
I T TRANSPORTATION CORP

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

GAS COMPANY RD 1977

4002 INDUSTRIAL TRUCKING INC

DRAFT

APPENDIX

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

SHAWN MUNGER, CHG
Principal Geologist

EDUCATION

BS, Geology, U.C. Davis, 1985

EXPERIENCE

Years with ENGEO: 31
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Certified Hydrogeologist, CA, 413

8 Hour HAZWOPER Training, CA, 160115576014

Professional Geologist, CA, 5810

Certified Environmental Manager, NV, 1332

40 Hour HAZWOPER Training, CA, 100830513934

SPECIALIZATIONS

- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

Since joining ENGEO in 1985, Shawn has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, Phase I and II Site Assessment projects, UST site investigations, risk based corrective action (RBCA), VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager for environmental and hazardous materials projects involving groundwater hydrology, contaminant fate and transport, and remediation. He is Principal-in-Charge of the environmental components of our on-call contracts with the City of Sacramento and the County of Sacramento.

Select Project Experience

14234 Saratoga Sunnyvale Road—Saratoga, CA
Project Geologist. Shawn performed Principal review of ENGEO's environmental documents. This 2.2-acre townhome site is planned for a new multi-family development comprising up to 20 units in 8 buildings. The site immediately borders Saratoga Creek and contains numerous mature trees, many of which are to be saved. Site challenges include shallow groundwater, creek bank stability, and the potential for liquefaction and lateral spreading.

Lenihan Dam Outlet Modification—Los Gatos, CA
Principal Geologist. Shawn provided technical advice, coordination, consultation, and review of ENGEO's documents to provide quality mitigation measures. The findings were presented to SCVWD and it was concluded that the stockpile was sufficient for transportation. This analysis led to significant project budget savings by avoiding removal and disposal at a solid waste disposal facility. The project consisted of a stockpile approximately 6,000 cubic yards that required profiling as requested by Santa Clara Valley Water District before use of as site backfill.

199 River Oaks Parkway—San Jose, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, risk evaluation, and demolition observation plans. The project consists of a proposed six-story podium structure with one level to be constructed below grade. The property is a former semiconductor facility that has received conditional closure from the Regional Water Quality Control Board and is approved for construction.

Riverside Avenue Property—Roseville, CA
Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Assessments and site

characterization. The project site consists of an active auto sales and service facility. The historic use of the facility for industrial purposes resulted in soil and groundwater impacts beneath the site. The City of Roseville revised its plans for acquiring and redeveloping the site due to the identified soil and groundwater impacts.

1301 Standard Oil Ave—Pittsburg, CA
Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Characterization. The property is an abandoned wastewater treatment plant with processing buildings, clarifier tanks, and sludge beds.

Pleasant Hill BART Station—Walnut Creek, CA
Principal in Charge. Shawn provided oversight, data analysis and consultation during the preparation of a Phase II Environmental Site Assessment. The property is an existing BART station that encompasses 20 acres, including the platform/station area, electrical facilities, a parking garage and additional paved parking areas.

County Crossings Property—Antioch, CA
Principal in Charge. Shawn provided environmental consultation and data review with regard to soil and groundwater contamination. Constituents of concern include petroleum hydrocarbons, nitrates and manganese. The approximately 264-acre site includes several former industrial facilities and petroleum pipelines. Soil and groundwater at the site has been impacted with petroleum hydrocarbons, nitrates and manganese. Planned uses include commercial, residential, retail, and a BART-oriented transit village. The center, which is currently in the entitlement phase, is estimated to break ground in 2011.

620 North Ninth Street—San Jose, CA
Principal in Charge. Shawn provided oversight of soil, groundwater and soil gad characterizations, risk evaluations and Remedial Action Plan preparation. Shawn also closely interacted with RWQCB staff to achieve approval for residential development. The property is a former fruit packing plant and food preparation facility. The proposed development consists of a single-family residential subdivision.

Westshore—Richmond, CA
Project Manager. Shawn conducted Phase I and II Site Assessments, risk evaluations and prepared a soil management plan. The property was a former automotive manufacturing plant proposed for a multi-unit condominium development, including a 6-story podium structure to include five residential floors with 269 units and one parking floor.

Mills Ranch—King City, CA
Principal in Charge. Shawn provided principal oversight of Phase I/II Environmental Site Assessments and risk evaluations. The approximate 80-acre property is used for agricultural cultivation and commercial uses. The proposed mixed-use development includes over 400 single-family residential lots.

Select Foods Site/Cross Creek—Hayward, CA
Principal in Charge. Shawn provided principal oversight, consultation, and data analysis. The property was a former processed food facility, a drum recycling business, battery manufacturing operation and a bus assembly plant. Following completion of soil remediation under RWQCB oversight, the property was developed into a single-family residential subdivision.

Arroyo Crossing—Livermore, CA
Principal in Charge. Shawn provided oversight, data analysis and regulatory consultation while ENGEO provided geotechnical and environmental engineering services for this 34-acre site. This former corporation yard and quarry site was developed into a single-family residential subdivision.

Renaissance Square—Concord, CA
Project Manager. Shawn provided consultation, data analysis, and field observation. This former automotive dealership was redeveloped as a five-story multi-family residential structure supported on slab-on-grade foundations, with two levels of below-grade parking. Petroleum hydrocarbon-impacted soil was encountered during excavation of the parking structure, which required characterization and remediation. Soil impacts were attributed to former sumps, USTs and hydraulic lifts.

Union Pacific Railroad Corridor—San Jose, CA
Project Manager. Shawn prepared a Phase I and II Environmental Site Assessment. Work included a site reconnaissance, historical records research and recovery of soil samples with laboratory analysis. Lead impacted soil was identified which required risk evaluation. This former1800 lineal foot section of the former Union Pacific Railroad Corridor was proposed for mixed-use development.

Former SFPP Alignment—Concord, CA
Project Manager. Shawn prepared a Phase I and II Environmental Site Assessment. The site was a former ±6,500-foot corridor formerly occupied by the Southern Pacific Railroad. Kinder Morgan petroleum pipelines existed within an easement along the property. The southern portion of the site was crossed by East Bay Municipal Utilities District water distribution lines and a multi-lane highway overpass. The corridor was developed as a self-storage facility. Work included the recovery of soil and groundwater samples along the SP right of way.

Hercules Property—Hercules, CA
Project Manager. Shawn provided oversight of a Phase I Environmental Site Assessment, site asbestos survey, site characterization, and demolition observation/contaminant assessment. The project area consists of ±167 acres located near and along the southeastern shore of San Pablo Bay in Hercules. The property was once a portion of a 1300-acre manufacturing facility that was operated by DuPont from 1879 to 1913 and Hercules Incorporated from 1913 to 1979. The planned development includes single/multi-family residential development with some commercial components.

Highlands Ranch—Antioch, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

DRAFT

ENGEO
Expect Excellence

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Gas Company Road Solar Project

Noise Impact Assessment

Taft, California

Prepared For:

ZGlobal
750 West Main Street
El Centro, California 92243

October 2019

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, construction monitoring, and compliance reporting.

Citation: ECORP Consulting, Inc. 2019. Noise Impact Assessment – Gas Company Road Solar, Taft, Kern County, California. Prepared for ZGlobal. October.

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LIST OF ACRONYMS AND ABBREVIATIONS

BESS	Battery Energy Storage System
Caltrans	California Department of Transportation
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibel
EIR	Environmental Impact Report
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
L_{dn}	Day/Night Noise Level
L_{eq}	Equivalent Noise Level
MW	Megawatt
MWh	Megawatt-hour
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
PV	Photovoltaic
Project	Palm Avenue Residential
RMS	Root mean square

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the Gas Company Road Solar Project (Project), which includes the construction of eight-megawatt (MW)/24 megawatt-hour (MWh) photovoltaic (PV) and Battery Energy Storage System (BESS) system located in Taft, California. This report was prepared as a comparison of predicted Project noise levels to noise standards promulgated by the City of Taft General Plan Noise Element. The purpose of this report is to estimate Project-generated noise and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The Project site is located in the city of Taft, located in southwest Kern County (see Figure 1). The Project site is an approximately 60-acre site located south of the East Cedar Street/Airport Road intersection. The irregular shaped site is generally bound by undeveloped land and Gas Company Road to the north and east, a wastewater treatment plant to the south, and Airport Road and industrial uses to the west (see Figure 2). The Project site is currently characterized by flat and undeveloped land.

The Project proposes to install a grid-tie PV system on a tracker ground-mounted racking system spanning the 60-acre site. The major components of the PV system consist of PV modules, inverters, and array single-axis trackers.

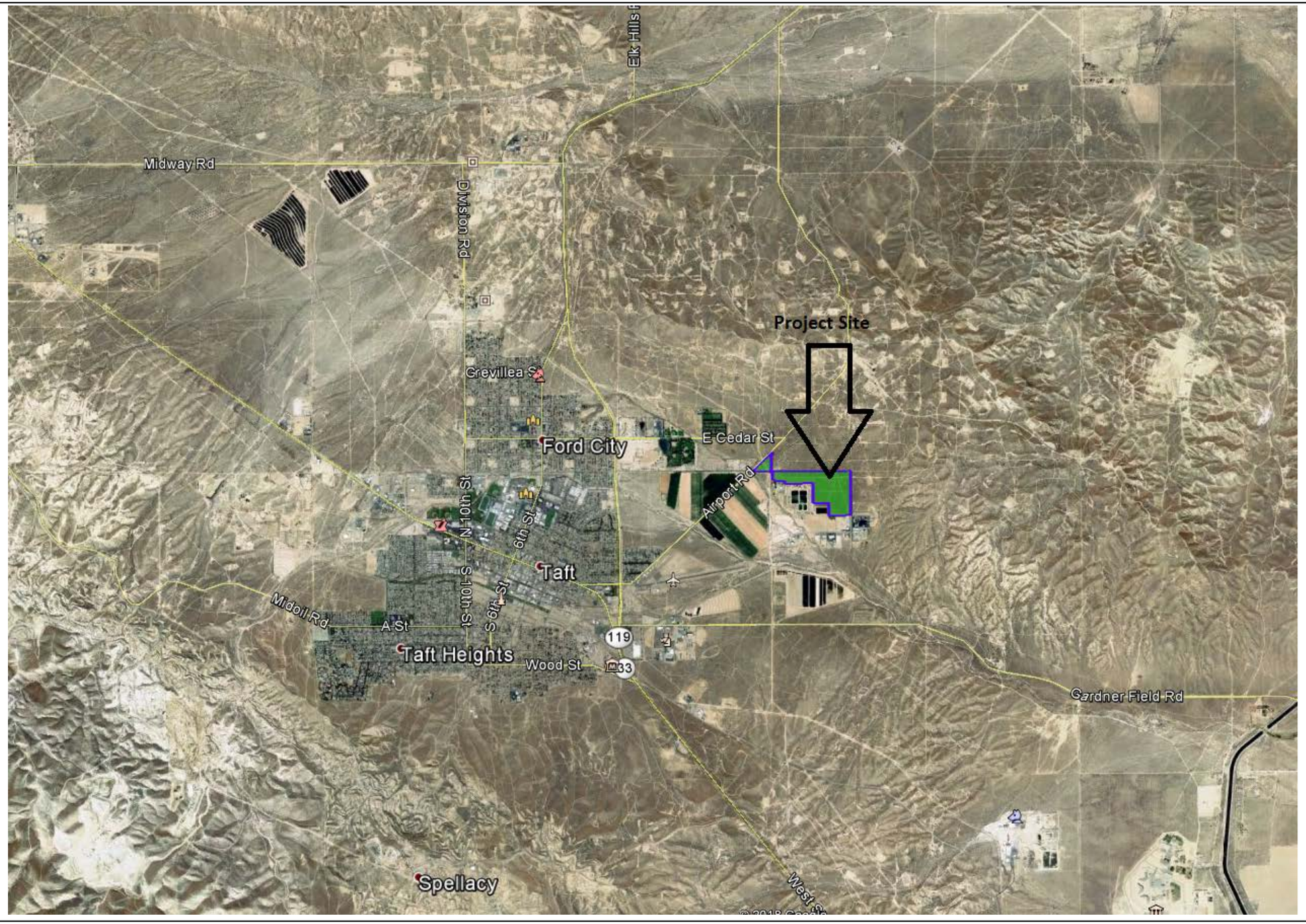
The Project site has a City of Taft General Plan designation of Low-Density Residential with a small portion of the most western part of the site, Assessor Parcel Number 220-300-14-00, being designated as Commercial. The Low-Density Residential designation is intended to allow for low-density residential neighborhoods consisting of detached or attached units and permitted secondary dwelling units. Land designated as commercial is intended to provide for local and regional shopping centers, highway commercial land uses, general retail land uses, and office developments.

2.0 NOISE BACKGROUND

2.1 Fundamentals of Sound and Environmental Noise

2.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the dB scale, three sources of equal loudness together would produce an increase of five dB.



Map Date: 9/*26/2019*
Photo (or Base) Source: *Google Earth*

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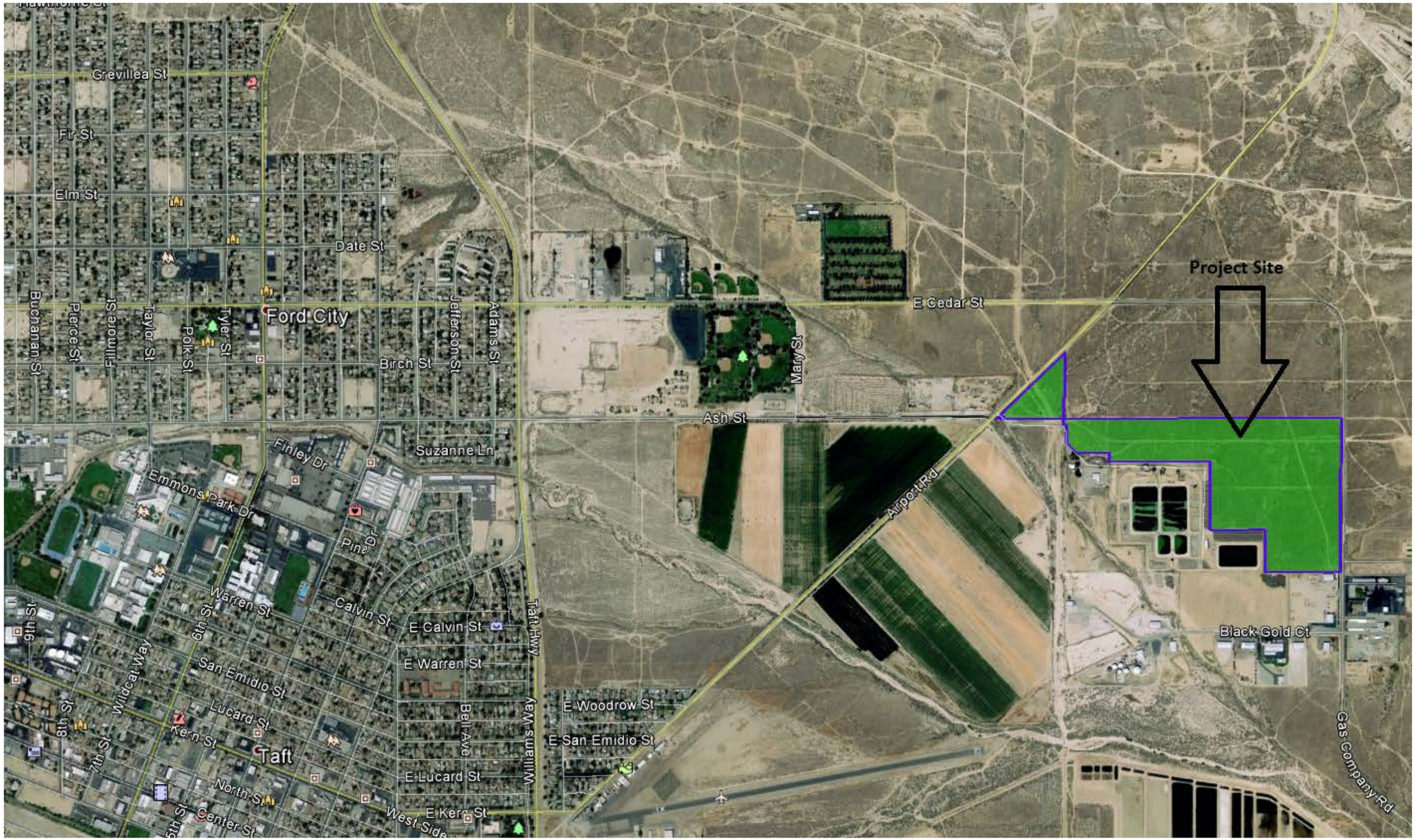
Figure 1. Project Vicinity

2019-192



Map Date: 9/*26/2019*
Photo (or Base) Source: *Google Earth*

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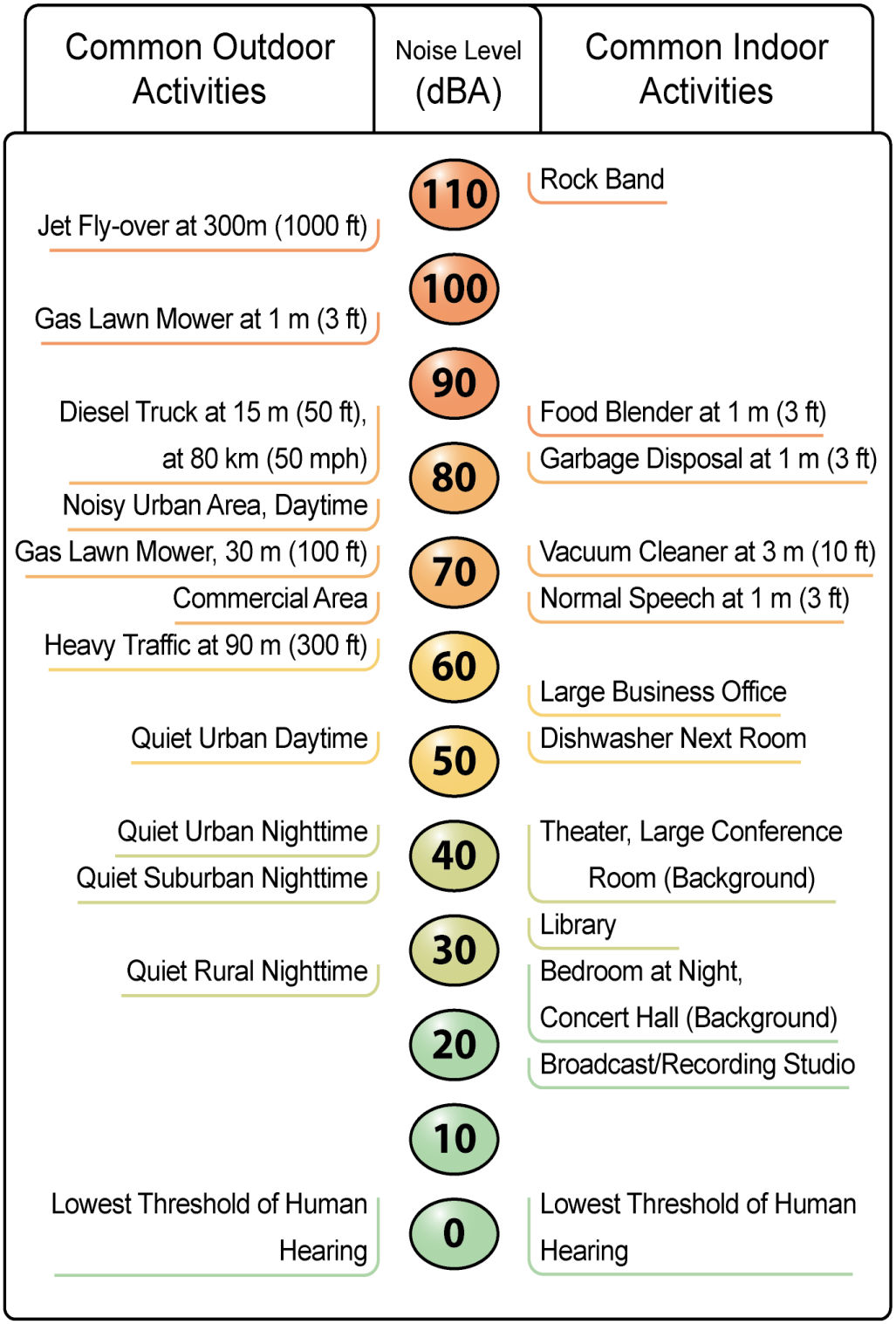
Figure 2. Project Location

2019-192

Typical noise levels associated with common noise sources are depicted on Figure 3.



Source: California Department of Transportation (Caltrans) 2012

Figure 3. Common Noise Levels

2.1.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes; and stationary sources, such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately six dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source, and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

2.1.3 Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and Community Noise Equivalent Level (CNEL) are measures of community noise. Each is applicable to this analysis and defined in Table 1.

The dBA sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be

utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus one dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about plus or minus one to two dBA.

Table 1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded one percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 pm to 10:00 pm and a 10 dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	Noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

2.1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from

interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA noise levels, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of one dBA cannot be perceived by humans.
- Outside of the laboratory, a three-dBA change is considered a just-perceivable difference.
- A change in level of at least five dBA is required before any noticeable change in community response would be expected. An increase of five dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

2.1.5 Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise

and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Groundborne vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

2.2.2 Vibration Sources and Characteristics

Table 2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care as vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earthmoving that requires the use of heavy-duty earthmoving equipment.

For the purposes of this analysis, the PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage and human complaints.

Table 2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels			
Peak Particle Velocity (inches/second)	**Approximate Vibration Velocity Level (VdB)**	**Human Reaction**	**Effect on Buildings**
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2004

2.3 Existing Environmental Noise Setting

2.3.1 Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest noise-sensitive land use, located in unincorporated Kern County, is a single-family residence located approximately 0.40 mile northwest of the Project site.

2.3.2 Existing Ambient Noise Environment

Taft is impacted by various noise sources. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the city that generate stationary-source noise. The Taft-Kern County Airport is located approximately one mile southwest of the Project site.

As previously described, the Project site is currently undeveloped with no sensitive land uses in the immediate vicinity. The General Plan Environmental Impact Report (EIR) (2009) conducted ambient noise measurements for the purpose of documenting and measuring the existing noise environment in various areas of the city. Noise measurement location 9, Table 4.6-2 of the General Plan EIR, located at Franklin Field, approximately 0.90 mile west of the Project site, had an ambient noise measurement of 48.1 dBA.

3.0 REGULATORY FRAMEWORK

3.1 Federal

3.1.1 Occupational Safety and Health Act of 1970

OSHA regulates on-site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 dBA over an eight-hour work shift (29 Code of Federal Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

3.2 State

3.2.1 State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (State of California 2003), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

3.2.2 State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

3.3 Local

3.3.1 City of Taft General Plan Noise Element

The Noise Element of the General Plan provides policy direction for minimizing noise impacts on the community and for coordinating with surrounding jurisdictions and other entities regarding noise control. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise,

noise considerations will influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems.

The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations within Taft that would negatively affect noise-sensitive land uses. Uses such as schools, hospitals, child care, senior care, congregate care, churches, and all types of residential use should be located outside of any area anticipated to exceed acceptable noise levels as defined by the Noise and Land Use Compatibility Guidelines, or should be protected from noise through sound attenuation measures such as site and architectural design and sound walls. The City of Taft has adopted these guidelines in a modified form as a basis for planning decisions based on noise considerations. These guidelines are shown in Table 3 and include interior and exterior noise levels. In the case that the noise levels identified at a proposed project site fall within levels considered acceptable, the project is considered compatible with the existing noise environment.

Table 3. Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources

Land Use	Interior Spaces (L_{dn}/CNEL, dB)	Outdoor Activity Areas (L_{dn}/CNEL, dB)		
		Acceptable	Conditionally Acceptable	Conditionally Unacceptable
Residential, Low Density Single-Family, Duplex, Mobile Homes	45	55-65	65-75	75-Above
Residential, Multi-Family	45	55-65	65-75	75-Above
Transient Lodging – Hotels, Motels	45	55-65	65-75	75-Above
Mixed Use	45	55-65	65-75	75-Above
Schools, Libraries, Churches, Hospitals, Nursing Homes	45	55-65	60-70	75-Above
Auditoriums, Concert Halls, Amphitheaters	-	-	55-70	-
Sports Area, Outdoor Spectator Sports	-	-	55-75	-
Playgrounds, Neighborhood Parks	-	55-70	70-75	-
Office Buildings, Businesses, Commercial and Professional	-	55-70	70-75	75-Above
Industrial, Manufacturing, Agricultural	-	55-75	70-80	75-Above

Source: City of Taft 2009

Notes:

Acceptable – (Mitigation Not Required) Specific land use is acceptable.

Conditionally Acceptable – (Mitigation Required) Use should be permitted only after careful study and inclusion of mitigation as needed to satisfy policies of Noise Element.

Conditionally Unacceptable – (Mitigation Required) Use may be infeasible. Use should be permitted only after careful study and inclusion of mitigation as needed to satisfy policies of Noise Element.

The Noise Element also contains goals, policies, and actions that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The following relevant and applicable goals, policies, and actions from the City of Taft's Noise Element have been identified for the Project.

Goal N-1: Prevent excess levels of unwanted noise.

Goal N-2: Protect existing noise-sensitive land uses from encroachment of and exposure to excess levels of noise.

Goal N-3: Protect the City's economic base by preventing the encroachment of noise-sensitive land uses near known noise-producing sources.

Police N-1: Require new development to conform with noise levels contained in Table 3. Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards.

> **Action N-b1:** Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards.

Police N-2: Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation.

Police N-3: Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance.

Police N-4: Minimize the impact of construction noise on adjacent uses.

> **Action N-4a:** Amend the Taft Municipal Code to establish standards for construction noise including the following:
>
> - Restrict noise-generated construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends.
> - Require temporary construction noise-control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects.

Police N-5: Encourage new development in the vicinity of the airport to be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan.

> **Action N-5a:** Discourage residential and noise-sensitive uses from being located near the airport.

Police N-7: Prohibit new non-residential land uses, including energy project proposals, from creating operational noise disturbances in existing noise-sensitive areas.

Police N-7: Mitigate noise created by proposed non-transportation noise sources.

3.3.2 City of Taft Municipal Code

The City of Taft's Municipal Code regulates loud, unnecessary, and disturbing noise from various sources within the city. The City's Municipal Code does not, however, include specific noise standards for noise sources, nor does it identify specific hourly limitations for construction-related activity.

3.3.3 Kern County General Plan and Municipal Code

The Project site is located adjacent to unincorporated lands administered by the County of Kern. The Kern County Noise Element identifies goals, policies, and implementation measures that are used to guide development with regard to noise. The General Plan identifies residential areas, schools, convalescence and acute care hospitals, parks and recreational areas, and churches as noise-sensitive land uses. In noise-sensitive areas, exterior noise levels generated by new projects are to be mitigated to 65 dB L_{dn} or less in outdoor activity areas and 45 dB L_{dn} or less within interior living spaces or other noise-sensitive interior spaces.

The Kern County Municipal Code, Section 8.36.020, prohibits noise generate from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends.

4.0 NOISE IMPACT ASSESSMENT

4.1 Thresholds of Significance

Criteria for determining the significance of noise impacts were developed based on information contained in the California Environmental Quality Act Guidelines Appendix G. According to the guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

2) Generation of excessive groundborne vibration or groundborne noise levels.

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

For purposes of this analysis and where applicable, the City of Taft noise standards were used for evaluation of Project-related noise impacts.

4.2 Methodology

This analysis of the existing and future noise environments is based on noise-prediction modeling and empirical observations. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (2008). Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels

associated with construction equipment, obtained from the Caltrans guidelines set forth above. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses.

In order to estimate the worst-case operational noise levels that may occur at the nearest noise-sensitive receptor, onsite operational noise levels have been calculated with the SoundPLAN 3D noise model (which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers), coupled with noise measurements that were taken by ECORP Consulting, Inc. (ECORP) at an existing solar energy generation facility. Specifically, ECORP conducted a 30-minute reference noise measurement within the IVC solar generation facility in Imperial County with a Larson Davis SoundExpert LxT precision sound-level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. This reference measurement identified an ambient noise environment of 47.1 dBA at the existing solar energy generation facility (see Attachment A). Therefore, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with Project operations.

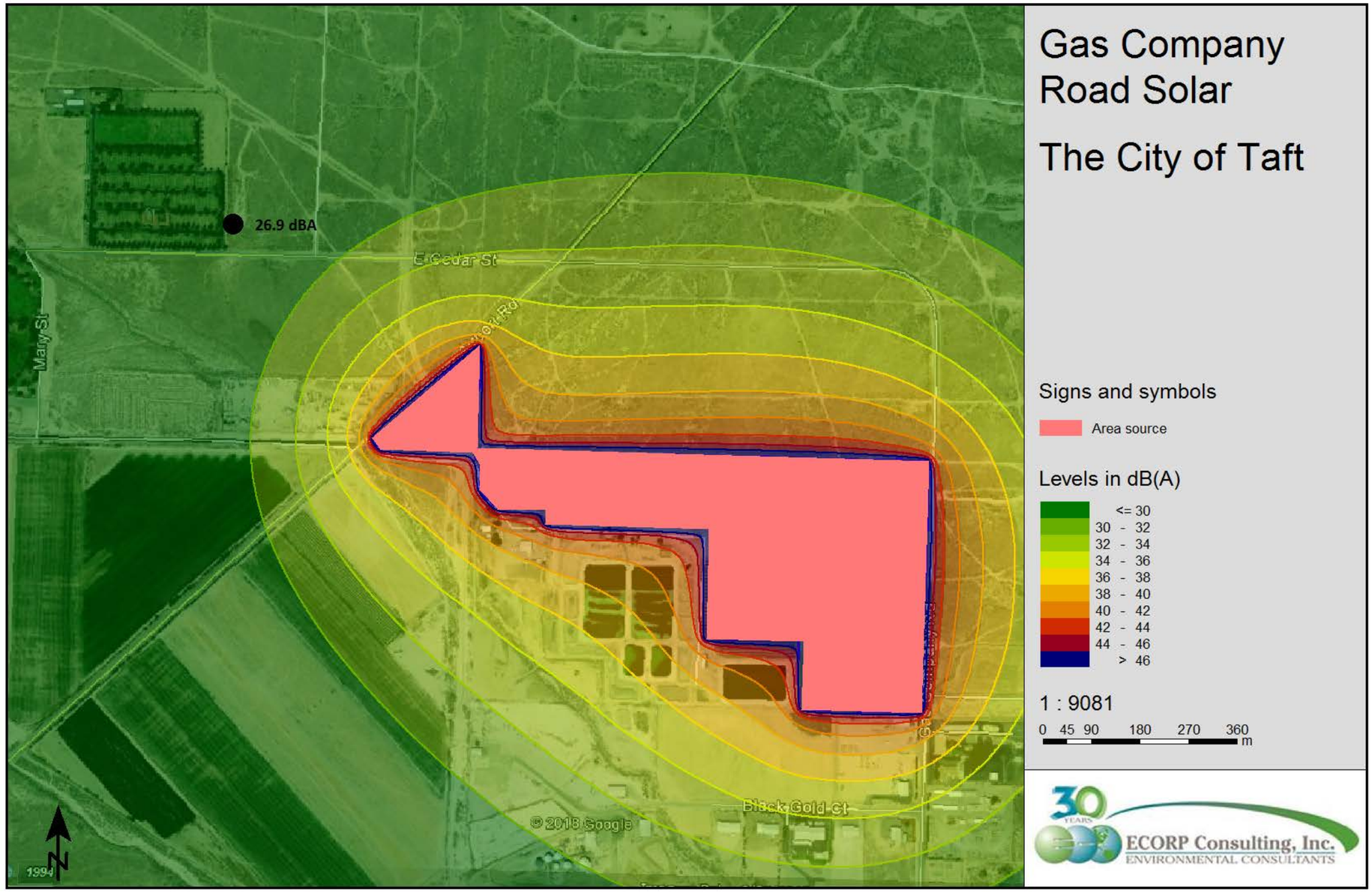
4.2.1 Impact Analysis

Project Construction Noise

Would the Project Result in Short-Term Construction-Generated Noise in Excess of City Standards?

Construction noise associated with the proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., building construction, paving). Noise generated by construction equipment, including earthmovers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive receptors in the vicinity of the construction site.

Table 4 indicates the anticipated noise levels of construction equipment. The average noise levels presented in Table 4 are based on the quantity, type, and acoustical use factor for each type of equipment that is anticipated to be used.



Map Date: 9/*26/2019*
Photo (or Base) Source: *SoundPLAN*

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Figure 4. SoundPLAN Noise Graphic

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Table 4. Maximum Noise Levels Generated by Construction Equipment		
Type of Equipment	**Maximum Noise (L_{max}) at 50 Feet (dBA)**	**Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)**
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: FHWA, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2008.

As previously stated, the nearest noise-sensitive land use is a single-family residence located 0.40 mile, (2,112 feet) northwest of the Project site and is located in unincorporated Kern County. The noise levels from construction equipment at 50 feet range from 81.0 dBA to 70.0 dBA. The noise levels from construction operations decrease at a rate of approximately six dB per doubling of distance from the source. Thus, the noise levels at the nearest residence, 2,112 feet away, would range from 48.5 dBA to 37.5 dBA. These numbers fall below the exterior noise level threshold generated by new projects for noise-sensitive areas presented above in the Kern County General Plan.

Additionally, the City and County both limit the time that construction can take place but do not promulgate numeric thresholds pertaining to noise associated with construction. Specifically, Action N-4a of the Taft General Plan states that construction activity is exempt from City noise standards as long as it is conducted between the hours 6:00 a.m. and 7:00 p.m. Monday through Friday, and between 6:00 a.m. and 5:00 p.m. on weekends. Further, Section 8.36.020 of the County's Municipal Code prohibits noise generate from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends. Due to the fact that construction of the proposed Project will be occurring in the City of Taft, the City's construction noise standard is the most applicable to this analysis. It is typical to regulate construction noise with time limits as opposed to numeric noise thresholds since construction noise is temporary, short term, intermittent in nature, and would cease on completion of a project. Furthermore, the City of Taft is a developing urban community and construction noise is generally accepted as a reality within the urban environment. Additionally, construction would occur through the Project site and would not be concentrated at one point. Therefore, as long as construction activities are conducted within the permitted hours as required by the City of Taft General Plan Action N-4a, noise generated during construction activities would not exceed City noise standards.

Project Operational Noise

Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of City Standards?

Project Land Use Compatibility

The City of Taft's land use compatibility table provides the City with a tool to gauge the compatibility of new land users relative to existing noise levels. This table, presented as Table 3, identifies acceptable, conditionally acceptable, and conditionally unacceptable noise levels for various land uses, including low-density residential and commercial uses such as that of the Project site. In the case that the noise levels identified at the Project site fall within levels considered acceptable, the Project is considered compatible with the existing noise environment. As shown in Table 3, an acceptable noise level for locating residential uses is anything under 65 dBA CNEL and 70 dBA CNEL for commercial. As previously stated, the General Plan EIR conducted ambient noise measurements and found that approximately 0.90 mile west of the Project site had an ambient noise measurement of 48.1 dBA. It can be assumed that the noise on the Project site is very similar to the ambient recorded measurement; as such it is an acceptable location for residential and commercial uses. However, as stated in Action N-5a, the City discourages all residential and noise-sensitive uses from being located near the airport. The Project site is located approximately one mile from the Taft-Kern County Airport and therefore is not an acceptable location for residential uses. The Project is proposing the construction of a 60-acre solar field and would not include the construction of any noise-sensitive uses. Therefore, for the reasons listed above, the Project site is an acceptable location for the desired land use.

Project Operations – Onsite Noise Sources

The main stationary operational noise associated with the Project would be from the proposed transformers, inverters, substation, and transmission lines. Onsite Project operations have been calculated using the SoundPLAN 3D noise model. As previously stated, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with the Project operations. The results of this model can be found in Appendix A. Table 5 shows the predicted Project noise levels at the nearest noise-sensitive land use in the Project vicinity, as predicted by SoundPLAN.

Table 5. Modeled Operational Noise Levels

Location	Modeled Operational Noise Attributed to Project (L_{eq} dBA)	County Standard (L_{dn}, dB)	Exceed Standard?
Property line of the nearest residence.	26.9	65	No

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Appendix A for noise modeling assumptions and results.

Note: Reference noise measurement used to calculate Project onsite noise propagation identified at 47.1 dBA, per 30-minute measurements taken at a IVC solar generation facility in Imperial County.

As shown in Table 5, predicted noise levels as a result of Project operations have the potential to be 26.9 dBA at the nearest residence. This number falls below County standards and is less than what is currently being experienced in the area per the General Plan EIR. Therefore, operations of the proposed Project would not increase the ambient noise environment at the nearest residence and would not exceed County standards.

Project Operations – Offsite Traffic Noise

The employee staff serving the Project site once in operation is anticipated to be minimal. Typical solar PV energy facilities require intermittent visits from an electrical engineer to periodically plan and coordinate operations and maintenance activities, as well as two to three instrumentation and controls technicians to perform maintenance and troubleshooting/repair activities. According to the 2013 Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, doubling of traffic on a roadway would result in an increase of three dBA (a barely perceptible increase). The vehicle trips to the site would be nominal compared to the vehicle trips currently experienced on vicinity roadways.

For example, according to the General Plan EIR, Table 4.4-2, Cedar Street-Airport Road to SR 119, which runs adjacent to the Project site, accommodates approximately 655 vehicle trips per day. Operations of the proposed Project would not instigate enough traffic to result in a perceptible increase in traffic noise levels.

Project Groundborne Vibration

Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the proposed Project would be primarily associated with short-term, construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction as such equipment is not generally necessary for solar facility construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 6.

Table 6. Vibration Source Amplitudes for Construction Equipment	
Equipment Type	**Peak Particle Velocity at 25 Feet (inches per second)**
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.082
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018; Caltrans 2004

The City does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full-disclosure purposes. For comparison purposes, Caltrans' (2004) recommended standard of 0.2 inch per second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site is a building located at the wastewater treatment plant, approximately 50 feet to the south of the Project site. Based on the vibration levels presented in Table 6, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.089 inch per second peak particle velocity at 25 feet. Thus, structures located 50 feet away would not be negatively affected.

Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels.

Airport Noise

Would the Project Expose People Residing or Working in the Project Area to Excessive Airport Noise Levels?

The Project site is located approximately one mile southwest of the Taft-Kern County Airport. The Project site is located outside of the 60 dBA CNEL noise contour per Figure 4-69 of the Airport Land Use Compatibility Plan of Kern County. Implementation of the proposed Project would not affect airport operations or result in increased exposure of noise-sensitive receptors to aircraft noise.

Cumulative Noise Impacts

Cumulative Construction Noise

Construction activities associated with the proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the proposed Project

was determined to be less than significant following compliance with the City General Plan. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable City Municipal Code limitations on construction. Therefore, the Project would not contribute to cumulative impacts during construction.

Cumulative Operational Noise

Cumulative noise impacts would primarily be associated with the transformers, inverters, substation, and transmission lines from the solar facility. Long-term noise sources associated with development at the Project, combined with other cumulative projects, could cause local noise-level increases. Noise levels associated with the proposed Project and related cumulative projects together could result in higher noise levels than considered separately. However, noise increase as a result of the Project would not be perceivable and would not be expected to exceed City standards. Project traffic would not result in a significant increase in traffic noise on a project level; therefore, the Project's contribution to cumulative impacts would also be less than significant.

5.0 REFERENCES

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ATTACHMENT A

Existing (Baseline) Noise Measurements – Project Site Vicinity

SoundPLAN
Output Source Information

Number	Reciever Name	Floor	Level at Receiver
1	Nearest residence to the Project site - 0.4 mile to the northwest	Ground Floor	26.9 dBA

Number	Noise Source Information	Citation	Level at Source
1	Noise Activity at the IVC solar generation facility in Imperial County	ECORP Consulting	47.1dBA

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Traffic Study for
Kern County Taft Solar Plant

November 10, 2019

Prepared For:

ECORP Consulting, Inc.
215 North Fifth Street
Redlands, CA 92374 USA
(909) 307-0046

Prepared by:

1100 Corporate Center Drive, Suite 201
Monterey Park, California 91754
(323) 260-4703

JB91227

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ATTACHMENT A - STUDY ROADWAY SEGMENT 24-HOUR TRAFFIC COUNT SUMMARIES

1. Introduction

The purpose of this traffic study is to assess the traffic impacts on the surrounding roadway system of construction activities and post-construction operations for the proposed solar power plant (Project) in the Kern County community of Taft. The report was prepared while under contract for ECORP Consulting, Inc., for inclusion in the environmental documentation.

A. Project Description

The proposed Project would be constructed on 61.72 acres of land that is currently vacant, located near the northeast corner of the community of Taft in the County of Kern. Direct access to the site is provided by Ash Street, an east-west roadway that connects the property to State Highway 119 (SR-119), located approximately one mile west of the Project site. Airport Road a southwest-northwest roadway connects the site to State Route 119 (SR-119) towards the south, located approximately one mile to the southwest of the Project site.

Construction of the proposed Project is estimated to be completed by the year 2021.

The Project construction activities would generate additional vehicle trips in the immediate area, based on necessary truck hauling/delivery trips and the construction employee population.

Operations Phase Traffic

The Project once constructed will not require a regular daily workforce. Maintenance and operations workforce would not generate a significant number of trips that would create impacts on the local transportation network or otherwise substantially affect levels of service in the area. Consequently, operations-period trip generation is not discussed further in this report.

C. Project Study Area

This study quantitatively assesses Project construction-period impacts on roadway segments in the vicinity of the Project site. Roadway segment counts were compiled from counts conducted along, conducted for this report.

The following are the study roadway segments that were included in the traffic impact analysis:

1. Ash Street, between SR-119 and Airport Road
2. Airport Road, between Ash Street and SR-119
3. SR-119 North, north of Cedar Street
4. SR-119, between Gardner Field Road and Airport Road

Figure 1 – Study Area Map

The daily traffic count summaries collected for these study roadway segments are provided in Attachment A. These volumes are analyzed in Section 4 of this report.

D. Analysis Methodology

KOA analyzed the trip distribution, trip assignment, and daily roadway volumes for the designated study area. In the sections that follow, impacts of the construction of the proposed Project on study area roadways are discussed. The analysis is based on the impacts of Project traffic during the peak of construction activity.

Project construction would be completed in 2021. This year was defined as the future analysis year.

2. Existing Conditions

The following describes the study area, along the primary routes to and from the Project site.

Ash Street is adjacent to the Project site and is a two-lane paved roadway with a striped centerline west of the intersection with Airport Road and is unstriped east of that intersection. There is no posted speed limit. There are soft shoulders with no curbs. Ash Street intersects with State Route 119 approximately 0.9 miles west of the project site.

Airport Road is a two-lane paved roadway with a striped centerline that intersects with Ash Street adjacent to the Project site. This roadway intersects with State Route 119 at its southwestern terminus.

State Route 119 (SR-119) is a north-south roadway that provides access to Ash Street and Airport Road from major freeway interchanges including I-5 and SR-99.

3. Project Construction Trips

This section focuses on the definition of construction truck and employee vehicle trip total that are expected to occur during the peak period of Project construction. The distribution and assignment of those trips to the study area roadway network is also discussed here.

A. Project Trip Generation Methodology

Project trip generation calculations included construction truck trip estimates and construction employee vehicle trips. The trip generation totals were determined based on the period which would generate the highest number of combined trips for the Project. Truck volumes were multiplied by a Passenger Car Equivalency (PCE) factor of 2.5 to estimate the real effect of total Project traffic, consistent with truck studies in the Southern California area.

Although some carpooling would likely occur during Project construction, trip generation calculations conservatively assumed that each employee would commute in a single personal vehicle. To provide a conservative analysis, the total number of trips analyzed represents the highest trips generated by both construction employees and trucks.

B. Trip Generation Totals

The total daily Project trips defined by Table 1 represent one-way inbound and outbound trips by both the construction personnel vehicles and construction trucks. The construction daily trip numbers are based on these peak construction input numbers:

- 4 daily peak-period truck round trips
- 50 construction employees on-site

The truck trip totals assumed up to two (semi type) trucks would arrive at the project site each day during construction. Each truck was assumed to make two round trips per day, so the four daily truck trips are round trips. Those trips were then multiplied by the PCE factor, a total resulting total of 10 trips.

Table 1 – Project Construction Weekday Trip Generation

TRIP GENERATION	AVERAGE DAILY PCE TRIPS		
	Trucks*	Employee	Total
Field Personnel	0	100	100
Construction Truck	10	0	10
TOTAL TRIPS	**10**	**100**	**110**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

During the peak period of construction, the Project site is estimated to generate a weekday daily total of 110 passenger car-equivalent trips.

This total daily number of trips is included in the analysis of the daily capacity of the affected roads while also accounting for existing traffic volumes. Peak-hour trips related to construction (i.e., during the morning and evening period when workers would be arriving and departing the site) were not considered because there is no discernable peak traffic period in the vicinity of the Project site.

C. Project Trip Distribution

Construction employee and truck vehicle trip patterns were based on the local roadway network that would provide primary access to the project site.

Ash Street has a full-access intersection with the SR-119 highway to the west of the Project site. Project construction-period traffic would use Ash Street and Airport Road to access the regional highway network. The analyzed roadway segments were therefore along Ash Street and Airport Road as well as portions of SR-119 north of Cedar Street and south of Airport Road. All of these are two-lane roadways.

The Project-generated trips were assumed to travel across all of the analyzed study roadway segments, with full volumes applied to each route to be conservative and to provide flexibility for final trip routes.

4. Project Impacts Analysis

A. Roadway Impact Analysis

As both existing and future projected volumes at the analyzed roadway segments are very low and do not approach the capacities of the roadways, this analysis focuses on daily volumes.

The tables below provide a comparison of the analyzed existing and future volumes with and without the Project, for the study roadway segments. Comparisons to the total roadway capacity are provided, based on the lane configuration of the roadways, and daily volume capacities generally defined by the Highway Capacity Manual that are 10,000 vehicles per lane for major roadways.

Table 2 provides a Project volume analysis based on the existing period analysis, included here based on CEQA precedents that project impact analyses should include an impact scenario that excludes future estimated traffic growth.

Table 2 – Project Study Roadway Segment
Existing Volumes Analysis

Roadway Segment	Existing Daily Volumes	Daily Construction Trips	Existing with Construction	% Increase	Roadway Capacity
Ash Street (between SR-119 and Airport Rd)	194	55	249	28%	10,000
Airport Road (bweteen Ash Street and SR-119)	360	55	415	15%	10,000
SR-119 North (north of Cedar Street)	8,028	55	8,083	1%	20,000
Taft Hwy/ SR-119 (between Gardner Field Rd and Airport Rd)	7,129	55	7,184	1%	20,000

Table 3 provides a Project volume analysis at the roadway segments based on a future volume analysis. Future year-2021 volumes were defined by multiplying the existing year-2019 volumes by an ambient growth rate of two percent per year.

Table 3 – Project Study Roadway Segment
Future Volumes Analysis

Roadway Segment	Future 2021 without Construction	Daily Construction Trips	Future 2021 with Construction	% Increase	Roadway Capacity
Ash Street (between SR-119 and Airport Rd)	202	55	257	27%	10,000
Airport Road (bweteen Ash Street and SR-119)	375	55	430	15%	10,000
SR-119 North (north of Cedar Street)	8,352	55	8,407	1%	20,000
Taft Hwy/ SR-119 (between Gardner Field Rd and Airport Rd)	7,417	55	7,472	1%	20,000

For the remainder of the construction period, construction traffic volumes would decline from the peak levels analyzed in these tables.

The roadway capacities of the roadway segments range from 10,000 to 20,000 vehicles per day. The roadway segments analyzed here would be operating in the range of 257 to 8,407 total vehicles per day based on the construction period numbers in Table 2 and Table 3.

On all of the roadway study segments, adequate capacity would remain during the construction period. At least half of the roadway capacity would remain. During the other non-peak months of the overall construction schedule, traffic volumes would decline from these peak levels.

The proposed Project would not create any significant impacts at the analyzed locations.

B. VMT Metrics Considerations

California Environmental Quality Act (CEQA) guidelines have recently changed to require vehicle miles traveled (VMT) metrics in CEQA transportation analysis efforts and not level of service (LOS). LOS metrics can continue to be used under local agency review of traffic circulation, but automobile delay cannot be the determinant of impacts.

VMT analysis is required under CEQA for review of impacts that could be caused by development projects. VMT metrics are not an appropriate measurement of project construction activity, however. VMT data focuses on trip type, automobile use, transit use, walking and bicycling, and general auto trip reduction qualities of development and the management of travel to and from development sites. As project construction activities involve necessary travel to and from the site by construction employees and the necessary use of construction truck delivery and hauling operations, VMT is not an appropriate analysis tool and has been excluded from this analysis.

ATTACHMENT A –
STUDY ROADWAY SEGMENT 24-HOUR TRAFFIC COUNT SUMMARIES

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Taft
Airport Road
B/ Woodrow Street - Ash Street
24 Hour Directional Volume Count

TFT004
Site Code: 041-19715

Start Time	16-Oct-19 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	6			0	4				
12:15		0	0			1	3				
12:30		0	2			0	5				
12:45		0	2	0	10	0	2	1	14	1	24
01:00		1	5			0	1				
01:15		1	**2**			0	2				
01:30		0	**7**			0	3				
01:45		0	**3**	2	17	0	4	0	10	2	27
02:00		0	**7**			0	5				
02:15		0	1			0	3				
02:30		0	5			0	5				
02:45		0	3	0	16	0	2	0	15	0	31
03:00		0	3			0	1				
03:15		0	1			0	2				
03:30		0	4			0	3				
03:45		0	3	0	11	1	7	1	13	1	24
04:00		2	6			0	3				
04:15		1	3			0	7				
04:30		0	0			2	2				
04:45		0	6	3	15	0	2	2	14	5	29
05:00		0	0			0	**3**				
05:15		1	2			1	**6**				
05:30		2	5			0	**14**				
05:45		4	3	7	10	1	**3**	2	26	9	36
06:00		4	1			1	1				
06:15		1	2			0	1				
06:30		1	0			3	0				
06:45		1	2	7	5	2	0	6	2	13	7
07:00		2	1			2	2				
07:15		5	0			1	2				
07:30		2	1			2	1				
07:45		2	2	11	4	1	3	6	8	17	12
08:00		2	0			2	2				
08:15		3	1			2	0				
08:30		1	2			2	4				
08:45		3	1	9	4	2	0	8	6	17	10
09:00		4	1			4	1				
09:15		1	2			1	2				
09:30		6	1			8	2				
09:45		2	2	13	6	3	1	16	6	29	12
10:00		0	0			1	2				
10:15		1	0			5	0				
10:30		4	0			0	0				
10:45		2	0	7	0	**7**	0	13	2	20	2
11:00		**3**	1			**1**	0				
11:15		**4**	0			**7**	0				
11:30		**5**	1			**5**	0				
11:45		**3**	0	15	2	1	1	14	1	29	3
Total		74	100	74	100	69	117	69	117	143	217
Combined Total		174		174		186		186		360	
AM Peak	-	11:00	-	-	-	10:45	-	-	-	-	-
Vol.	-	15	-	-	-	20	-	-	-	-	-
P.H.F.		0.625				0.714					
PM Peak	-	-	01:15	-	-	-	05:00	-	-	-	-
Vol.	-	-	19	-	-	-	26	-	-	-	-
P.H.F.			0.679				0.464				
Percentage		42.5%	57.5%			37.1%	62.9%				
ADT/AADT		ADT 360		AADT 360							

Counts Unlimited, Inc.

PO Box 1178
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Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Taft
Ash Street
B/ State Route 119 - Airport Road
24 Hour Directional Volume Count

TFT003
Site Code: 041-19715

Start	16-Oct-19	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	2			0	2				
12:15		0	1			0	0				
12:30		0	2			0	2				
12:45		0	0	0	5	0	1	0	5	0	10
01:00		0	2			0	1				
01:15		0	3			0	1				
01:30		0	3			0	0				
01:45		0	3	0	11	0	2	0	4	0	15
02:00		0	6			1	3				
02:15		0	1			0	3				
02:30		0	1			0	2				
02:45		0	3	0	11	0	3	1	11	1	22
03:00		0	3			0	0				
03:15		0	2			0	1				
03:30		0	3			0	1				
03:45		0	2	0	10	0	4	0	6	0	16
04:00		0	0			0	1				
04:15		0	0			0	3				
04:30		0	3			0	3				
04:45		0	2	0	5	0	1	0	8	0	13
05:00		1	0			0	**3**				
05:15		0	0			1	**1**				
05:30		0	**12**			1	**6**				
05:45		1	**3**	2	15	1	**4**	3	14	5	29
06:00		1	**2**			2	2				
06:15		3	**2**			0	0				
06:30		1	1			0	1				
06:45		0	1	5	6	0	0	2	3	7	9
07:00		0	3			2	3				
07:15		2	0			0	0				
07:30		1	0			2	0				
07:45		1	1	4	4	1	0	5	3	9	7
08:00		1	0			0	0				
08:15		2	0			0	0				
08:30		0	1			0	1				
08:45		0	1	3	2	1	0	1	1	4	3
09:00		**2**	0			1	1				
09:15		**5**	1			1	0				
09:30		**1**	2			1	0				
09:45		**1**	0	9	3	0	1	3	2	12	5
10:00		1	0			4	0				
10:15		2	0			1	0				
10:30		0	0			0	0				
10:45		2	0	5	0	**1**	0	6	0	11	0
11:00		2	0			**3**	0				
11:15		1	0			**3**	0				
11:30		4	1			**1**	1				
11:45		0	0	7	1	0	0	7	1	14	2
Total		35	73	35	73	28	58	28	58	63	131
Combined Total		108		108		86		86		194	
AM Peak	-	09:00	-	-	-	10:45	-	-	-	-	-
Vol.	-	9	-	-	-	8	-	-	-	-	-
P.H.F.		0.450				0.667					
PM Peak	-	-	05:30	-	-	-	05:00	-	-	-	-
Vol.	-	-	19	-	-	-	14	-	-	-	-
P.H.F.			0.396				0.583				
Percentage		32.4%	67.6%			32.6%	67.4%				
ADT/AADT		ADT 194		AADT 194							

Counts Unlimited, Inc.

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City of Taft
State Route 119
B/ Kern Street - Gardner Field Road
24 Hour Directional Classification Count

TFT002
Site Code: 041-19715

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	18	4	0	0	4	0	0	0	0	0	0	0	26
01:00	0	8	1	0	1	3	0	0	0	0	0	0	0	13
02:00	0	6	1	0	0	1	0	0	0	0	0	0	0	8
03:00	0	18	5	0	1	4	0	0	0	0	0	0	0	28
04:00	0	8	6	0	6	2	0	0	0	0	0	0	0	22
05:00	0	36	14	0	5	2	0	0	0	0	0	0	0	57
06:00	0	**64**	21	0	21	4	0	0	0	0	0	0	0	110
07:00	**2**	59	18	0	18	10	0	0	0	0	0	0	0	107
08:00	0	38	23	0	9	8	0	0	**2**	0	0	0	0	80
09:00	0	57	25	0	14	6	0	**3**	1	0	**2**	**1**	0	109
10:00	1	63	20	0	18	9	0	3	0	0	1	0	0	115
11:00	2	61	**40**	0	**35**	**15**	0	2	0	0	0	0	0	**155**
12 PM	**3**	86	37	0	35	7	0	1	0	0	**1**	0	0	170
13:00	1	87	36	0	45	10	0	2	0	0	1	0	0	182
14:00	3	143	47	0	60	11	0	3	**1**	0	1	0	0	269
15:00	2	128	**66**	0	**68**	**15**	0	2	0	0	0	0	0	281
16:00	1	**193**	61	0	38	12	0	3	0	0	0	0	0	**308**
17:00	1	138	52	0	29	10	0	**4**	0	0	0	0	0	234
18:00	2	79	40	0	27	7	0	1	0	0	0	0	0	156
19:00	1	55	25	0	11	5	0	0	0	0	0	0	0	97
20:00	0	43	13	0	6	5	0	0	1	0	0	0	0	68
21:00	0	37	13	0	6	3	0	0	0	0	0	0	0	59
22:00	0	29	8	0	10	1	0	0	0	0	0	0	0	48
23:00	0	13	7	0	2	3	0	0	0	0	0	0	0	25
Total	19	1467	583	0	465	157	0	24	5	0	6	1	0	2727
Percent	0.7%	53.8%	21.4%	0.0%	17.1%	5.8%	0.0%	0.9%	0.2%	0.0%	0.2%	0.0%	0.0%	
AM Peak	07:00	06:00	11:00		11:00	11:00		09:00	08:00		09:00	09:00		11:00
Vol.	2	64	40		35	15		3	2		2	1		155
PM Peak	12:00	16:00	15:00		15:00	15:00		17:00	14:00		12:00			16:00
Vol.	3	193	66		68	15		4	1		1			308
Grand Total	19	1467	583	0	465	157	0	24	5	0	6	1	0	2727
Percent	0.7%	53.8%	21.4%	0.0%	17.1%	5.8%	0.0%	0.9%	0.2%	0.0%	0.2%	0.0%	0.0%	

Counts Unlimited, Inc.

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City of Taft
State Route 119
B/ Kern Street - Gardner Field Road
24 Hour Directional Classification Count

TFT002
Site Code: 041-19715

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	6	2	0	1	0	0	0	0	0	0	0	0	9
01:00	0	7	2	0	1	2	0	0	0	0	**2**	0	0	14
02:00	0	4	2	0	3	2	0	0	0	0	1	0	0	12
03:00	1	20	2	0	3	0	0	0	0	0	0	0	0	26
04:00	0	30	12	0	21	2	0	0	0	0	0	0	0	65
05:00	0	103	44	0	56	7	0	2	0	0	1	0	0	213
06:00	**4**	**226**	**80**	0	**87**	**13**	0	3	0	0	0	0	0	**413**
07:00	1	84	41	0	72	13	0	2	**1**	0	2	0	0	216
08:00	0	55	31	0	53	5	0	1	0	0	1	0	0	146
09:00	1	57	33	0	34	10	0	4	0	0	0	0	0	139
10:00	2	55	25	0	44	8	0	**5**	0	0	0	0	0	139
11:00	1	60	32	0	45	6	0	4	1	0	0	0	0	149
12 PM	**3**	77	24	0	**36**	**14**	0	1	0	0	0	0	0	155
13:00	1	78	36	0	34	4	0	**3**	0	0	0	0	0	156
14:00	1	69	32	0	30	6	0	1	0	0	0	0	0	139
15:00	0	57	34	**1**	20	7	0	0	0	0	0	0	0	119
16:00	0	80	31	0	25	0	0	1	0	0	**1**	0	0	138
17:00	0	**107**	**39**	0	25	3	0	1	0	0	0	0	0	**175**
18:00	0	61	31	0	13	2	0	0	0	0	0	0	0	107
19:00	0	50	20	0	15	1	0	1	0	0	0	0	0	87
20:00	0	33	13	0	8	4	0	0	0	0	0	0	0	58
21:00	0	37	10	0	6	2	0	0	0	0	0	0	0	55
22:00	0	17	2	0	3	2	0	0	0	0	0	0	0	24
23:00	0	12	4	0	4	0	0	0	0	0	0	0	0	20
Total	15	1385	582	1	639	113	0	29	2	0	8	0	0	2774
Percent	0.5%	49.9%	21.0%	0.0%	23.0%	4.1%	0.0%	1.0%	0.1%	0.0%	0.3%	0.0%	0.0%	
AM Peak	06:00	06:00	06:00		06:00	06:00		10:00	07:00		01:00			06:00
Vol.	4	226	80		87	13		5	1		2			413
PM Peak	12:00	17:00	17:00	15:00	12:00	12:00		13:00			16:00			17:00
Vol.	3	107	39	1	36	14		3			1			175
Grand Total	15	1385	582	1	639	113	0	29	2	0	8	0	0	2774
Percent	0.5%	49.9%	21.0%	0.0%	23.0%	4.1%	0.0%	1.0%	0.1%	0.0%	0.3%	0.0%	0.0%	

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City of Taft
State Route 119
B/ Kern Street - Gardner Field Road
24 Hour Directional Classification Count

TFT002
Site Code: 041-19715

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	24	6	0	1	4	0	0	0	0	0	0	0	35
01:00	0	15	3	0	2	5	0	0	0	0	**2**	0	0	27
02:00	0	10	3	0	3	3	0	0	0	0	1	0	0	20
03:00	1	38	7	0	4	4	0	0	0	0	0	0	0	54
04:00	0	38	18	0	27	4	0	0	0	0	0	0	0	87
05:00	0	139	58	0	61	9	0	2	0	0	1	0	0	270
06:00	**4**	**290**	**101**	0	**108**	17	0	3	0	0	0	0	0	**523**
07:00	3	143	59	0	90	**23**	0	2	1	0	2	0	0	323
08:00	0	93	54	0	62	13	0	1	**2**	0	1	0	0	226
09:00	1	114	58	0	48	16	0	7	1	0	2	**1**	0	248
10:00	3	118	45	0	62	17	0	**8**	0	0	1	0	0	254
11:00	3	121	72	0	80	21	0	6	1	0	0	0	0	304
12 PM	**6**	163	61	0	71	21	0	2	0	0	**1**	0	0	325
13:00	2	165	72	0	79	14	0	**5**	0	0	1	0	0	338
14:00	4	212	79	0	**90**	17	0	4	**1**	0	1	0	0	408
15:00	2	185	**100**	**1**	88	**22**	0	2	0	0	0	0	0	400
16:00	1	**273**	92	0	63	12	0	4	0	0	1	0	0	**446**
17:00	1	245	91	0	54	13	0	5	0	0	0	0	0	409
18:00	2	140	71	0	40	9	0	1	0	0	0	0	0	263
19:00	1	105	45	0	26	6	0	1	0	0	0	0	0	184
20:00	0	76	26	0	14	9	0	0	1	0	0	0	0	126
21:00	0	74	23	0	12	5	0	0	0	0	0	0	0	114
22:00	0	46	10	0	13	3	0	0	0	0	0	0	0	72
23:00	0	25	11	0	6	3	0	0	0	0	0	0	0	45
Total	34	2852	1165	1	1104	270	0	53	7	0	14	1	0	5501
Percent	0.6%	51.8%	21.2%	0.0%	20.1%	4.9%	0.0%	1.0%	0.1%	0.0%	0.3%	0.0%	0.0%	
AM Peak	06:00	06:00	06:00		06:00	07:00		10:00	08:00		01:00	09:00		06:00
Vol.	4	290	101		108	23		8	2		2	1		523
PM Peak	12:00	16:00	15:00	15:00	14:00	15:00		13:00	14:00		12:00			16:00
Vol.	6	273	100	1	90	22		5	1		1			446
Grand Total	34	2852	1165	1	1104	270	0	53	7	0	14	1	0	5501
Percent	0.6%	51.8%	21.2%	0.0%	20.1%	4.9%	0.0%	1.0%	0.1%	0.0%	0.3%	0.0%	0.0%	

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City of Taft
State Route 119
N/ Cedar Street
24 Hour Directional Classification Count

TFT001
Site Code: 041-19715

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	7	7	0	2	0	0	1	4	0	0	0	0	21
01:00	0	6	2	0	1	0	0	0	3	0	0	0	0	12
02:00	0	3	3	0	0	0	0	0	1	0	0	0	0	7
03:00	0	7	4	1	5	0	0	0	4	0	0	0	0	21
04:00	0	14	8	0	8	0	0	0	2	0	0	0	0	32
05:00	**1**	63	39	0	27	2	0	0	2	0	1	0	0	135
06:00	1	**74**	**51**	2	**56**	**4**	0	3	10	0	1	0	0	**202**
07:00	0	35	42	3	45	2	0	**7**	9	0	0	0	0	143
08:00	1	32	39	2	41	2	0	2	7	**1**	0	0	0	127
09:00	0	36	45	6	34	3	0	1	7	0	**3**	**1**	0	136
10:00	0	35	42	6	47	2	0	4	9	0	2	0	0	147
11:00	1	40	45	**7**	53	1	0	7	**16**	0	2	0	0	172
12 PM	0	48	54	8	64	2	0	4	8	0	**1**	0	0	189
13:00	0	38	54	5	78	2	0	**15**	8	0	1	0	0	201
14:00	1	63	79	**14**	84	3	0	8	**13**	0	1	0	0	266
15:00	1	67	**81**	5	**108**	**4**	0	5	9	0	0	0	0	**280**
16:00	1	**71**	76	6	58	1	0	5	10	0	0	0	0	228
17:00	**3**	61	68	1	51	0	**1**	6	8	0	1	0	0	200
18:00	0	30	49	5	40	0	0	3	4	0	0	0	0	131
19:00	0	22	28	1	25	0	0	2	7	0	0	0	0	85
20:00	2	18	20	3	16	1	0	0	4	0	0	0	0	64
21:00	0	21	23	3	9	0	0	0	4	0	1	0	0	61
22:00	0	6	21	0	9	0	0	1	1	0	1	0	0	39
23:00	0	6	5	0	4	0	0	1	2	0	0	0	0	18
Total	12	803	885	78	865	29	1	75	152	1	15	1	0	2917
Percent	0.4%	27.5%	30.3%	2.7%	29.7%	1.0%	0.0%	2.6%	5.2%	0.0%	0.5%	0.0%	0.0%	
AM Peak	05:00	06:00	06:00	11:00	06:00	06:00		07:00	11:00	08:00	09:00	09:00		06:00
Vol.	1	74	51	7	56	4		7	16	1	3	1		202
PM Peak	17:00	16:00	15:00	14:00	15:00	15:00	17:00	13:00	14:00		12:00			15:00
Vol.	3	71	81	14	108	4	1	15	13		1			280
Grand Total	12	803	885	78	865	29	1	75	152	1	15	1	0	2917
Percent	0.4%	27.5%	30.3%	2.7%	29.7%	1.0%	0.0%	2.6%	5.2%	0.0%	0.5%	0.0%	0.0%	

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City of Taft
State Route 119
N/ Cedar Street
24 Hour Directional Classification Count

TFT001
Site Code: 041-19715

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	10	3	0	1	0	0	0	0	0	1	0	0	15
01:00	0	6	1	0	2	0	0	0	3	0	1	0	0	13
02:00	0	4	1	0	4	0	0	0	2	0	2	0	0	13
03:00	1	3	3	4	3	0	0	0	2	0	0	0	0	16
04:00	1	15	16	1	18	0	0	1	2	0	0	0	0	54
05:00	3	**67**	36	1	70	1	0	3	6	0	2	0	0	189
06:00	2	64	40	**9**	**89**	3	0	2	9	0	2	0	0	**220**
07:00	0	50	**44**	5	70	4	0	2	**12**	0	3	0	0	190
08:00	2	43	38	7	60	2	**1**	8	4	0	1	0	0	166
09:00	**4**	28	34	6	43	**7**	0	7	8	0	2	0	0	139
10:00	0	31	37	4	58	1	0	**9**	9	0	0	0	0	149
11:00	2	34	44	3	55	7	0	2	8	0	**4**	**1**	0	160
12 PM	**2**	35	30	**11**	38	3	0	1	**16**	0	**2**	0	0	138
13:00	2	41	37	4	**48**	**6**	0	**5**	3	0	2	0	0	148
14:00	1	36	37	5	38	6	0	2	11	0	1	0	0	137
15:00	1	47	51	1	41	4	0	3	9	0	0	0	0	157
16:00	1	78	44	2	42	3	0	0	4	0	1	0	0	175
17:00	1	**79**	**58**	3	35	0	0	3	4	0	0	0	0	**183**
18:00	0	45	44	3	26	0	0	0	2	0	0	0	0	120
19:00	1	46	26	1	21	0	0	1	3	0	0	0	0	99
20:00	0	29	14	1	17	0	0	0	4	0	0	0	0	65
21:00	0	31	15	3	9	0	0	0	3	0	0	0	0	61
22:00	0	18	6	0	6	0	0	0	1	0	0	0	0	31
23:00	0	13	9	0	1	0	0	0	0	0	0	0	0	23
Total	24	853	668	74	795	47	1	49	125	0	24	1	0	2661
Percent	0.9%	32.1%	25.1%	2.8%	29.9%	1.8%	0.0%	1.8%	4.7%	0.0%	0.9%	0.0%	0.0%	
AM Peak	09:00	05:00	07:00	06:00	06:00	09:00	08:00	10:00	07:00		11:00	11:00		06:00
Vol.	4	67	44	9	89	7	1	9	12		4	1		220
PM Peak	12:00	17:00	17:00	12:00	13:00	13:00		13:00	12:00		12:00			17:00
Vol.	2	79	58	11	48	6		5	16		2			183
Grand Total	24	853	668	74	795	47	1	49	125	0	24	1	0	2661
Percent	0.9%	32.1%	25.1%	2.8%	29.9%	1.8%	0.0%	1.8%	4.7%	0.0%	0.9%	0.0%	0.0%	

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24 Hour Directional Classification Count

TFT001
Site Code: 041-19715

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/16/19	0	17	10	0	3	0	0	1	4	0	1	0	0	36
01:00	0	12	3	0	3	0	0	0	6	0	1	0	0	25
02:00	0	7	4	0	4	0	0	0	3	0	2	0	0	20
03:00	1	10	7	5	8	0	0	0	6	0	0	0	0	37
04:00	1	29	24	1	26	0	0	1	4	0	0	0	0	86
05:00	**4**	130	75	1	97	3	0	3	8	0	3	0	0	324
06:00	3	**138**	**91**	11	**145**	7	0	5	19	0	3	0	0	**422**
07:00	0	85	86	8	115	6	0	9	21	0	3	0	0	333
08:00	3	75	77	9	101	4	**1**	10	11	**1**	1	0	0	293
09:00	4	64	79	**12**	77	**10**	0	8	15	0	5	**1**	0	275
10:00	0	66	79	10	105	3	0	**13**	18	0	2	0	0	296
11:00	3	74	89	10	108	8	0	9	**24**	0	**6**	1	0	332
12 PM	2	83	84	**19**	102	5	0	5	**24**	0	**3**	0	0	327
13:00	2	79	91	9	126	8	0	**20**	11	0	3	0	0	349
14:00	2	99	116	19	122	**9**	0	10	24	0	2	0	0	403
15:00	2	114	**132**	6	**149**	8	0	8	18	0	0	0	0	**437**
16:00	2	**149**	120	8	100	4	0	5	14	0	1	0	0	403
17:00	**4**	140	126	4	86	0	**1**	9	12	0	1	0	0	383
18:00	0	75	93	8	66	0	0	3	6	0	0	0	0	251
19:00	1	68	54	2	46	0	0	3	10	0	0	0	0	184
20:00	2	47	34	4	33	1	0	0	8	0	0	0	0	129
21:00	0	52	38	6	18	0	0	0	7	0	1	0	0	122
22:00	0	24	27	0	15	0	0	1	2	0	1	0	0	70
23:00	0	19	14	0	5	0	0	1	2	0	0	0	0	41
Total	36	1656	1553	152	1660	76	2	124	277	1	39	2	0	5578
Percent	0.6%	29.7%	27.8%	2.7%	29.8%	1.4%	0.0%	2.2%	5.0%	0.0%	0.7%	0.0%	0.0%	
AM Peak	05:00	06:00	06:00	09:00	06:00	09:00	08:00	10:00	11:00	08:00	11:00	09:00		06:00
Vol.	4	138	91	12	145	10	1	13	24	1	6	1		422
PM Peak	17:00	16:00	15:00	12:00	15:00	14:00	17:00	13:00	12:00		12:00			15:00
Vol.	4	149	132	19	149	9	1	20	24		3			437
Grand Total	36	1656	1553	152	1660	76	2	124	277	1	39	2	0	5578
Percent	0.6%	29.7%	27.8%	2.7%	29.8%	1.4%	0.0%	2.2%	5.0%	0.0%	0.7%	0.0%	0.0%	