Draft
Environmental Impact Report

SCH# 2022060193

Volume 3

Appendices G through J2

JASMINE SOLAR PROJECT

by SF Jasmine, LLC *(PP22401)*

Conditional Use Permit No. 3, Map No. 160
Williamson Act Land Use Cancellation 22-01

Kern County
Planning and Natural Resources Department
Bakersfield, California

October 2023

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Technical Assistance by:
Kimley-Horn

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Appendices – Volume 3

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Appendix G: Energy Utilization Study

Appendix H: Geotechnical Engineering Investigation Report

Appendix I: Paleontological Resources Assessment

Appendix J1: Phase I Environmental Site Assessment

Appendix J2: Phase II Environmental Site Assessment

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Appendix G

Energy Utilization Study



Jasmine Solar Project

Energy Utilization Study

prepared for

SF Jasmine, LLC
50 California Street, Suite 820
San Francisco, California 94111

prepared by

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

November 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Table of Contents

1 Project Description 1
1.1 Introduction 1
1.2 Project Location 1
1.3 Project Description 1
1.4 Construction 6
1.5 Operation and Maintenance 8
1.6 Decommissioning Activities 8
2 Background 9
2.1 Overview of Energy 9
2.2 Regional and Local Energy Setting 9
2.3 Regulatory Setting 13
3 Impact Analysis 19
3.1 CEQA Checklist 19
3.2 Methodology 19
3.3 Significance Thresholds 20
3.4 Energy Impact Analysis 21
4 Conclusions and Mitigation Measures 26
5 References 27

Tables

Table 1 Overall Project Construction Schedule 7
Table 2 2020 California In-State Generation 10
Table 3 PG&E's Percent of Bundled Retail Sales in 2020 11
Table 4 PG&E's Percent of Bundled Retail Sales in 2020 – Renewable Sources 12
Table 5 2019 Electricity Consumption in the PG&E Service Area 12
Table 6 Summary of Impacts 19
Table 7 Project Construction Energy Usage – Fuel Consumption 21
Table 8 Estimated Project Annual Operational Energy Consumption 22
Table 9 Project Consistency with Applicable General Plan Policies 24

Figures

Figure 1 Regional Location 2
Figure 2 Project Site Location 3

Appendices

Appendix A Energy Calculation Sheets

1 Project Description

1.1 Introduction

This study analyzes the potential energy impacts of the Jasmine Solar Project (herein referred to as Project) in unincorporated Kern County, California. Rincon Consultants, Inc. (Rincon) prepared this study for SF Jasmine, LLC for use in support of environmental documentation being prepared for the Project pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the energy impacts related to both temporary construction activity and long-term operation of the Project.

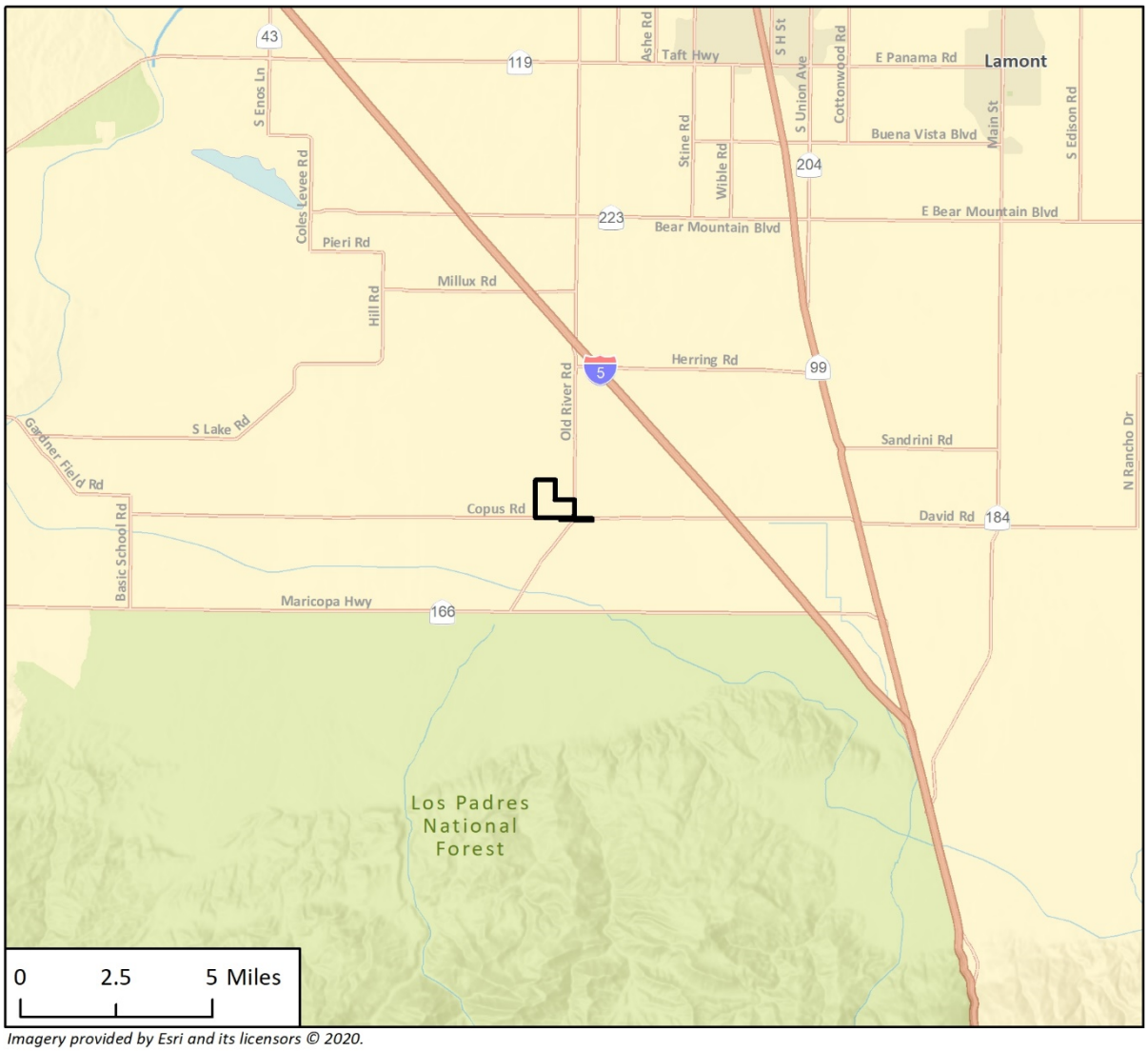
1.2 Project Location

The Project site is located in San Joaquin Valley in southwestern unincorporated Kern County at the intersection of Old River Road and Copus Road. The site is approximately four miles west of Interstate 5 and approximately three miles north of State Route 166. The Project site is approximately 15 miles east of Maricopa. The surrounding area consists of actively farmed agricultural land. Unpaved roads bound the Project site to the north and west. Old River Road is along the eastern boundary of the site, while Copus Road is adjacent to the Project site's southern boundary. The Project site would be located on properties identified by five Assessor's Parcel Numbers (APNs), two of which are pending a parcel split: APN 295-130-78; APN 295-130-36 (parcel split pending); and APN 295-130-80 (parcel split pending). The total area of the site is approximately 520 acres. Approximately 492 acres of the Project site would be developed and occupied by the proposed 70 MW solar facility. The existing Pacific Gas and Electric (PG&E) Lakeview Substation is located approximately 0.5 mile east of the main facility site and adjacent to the generation tie lie (gen-tie) corridor. Figure 1 shows the Project site's regional location, and Figure 2 shows an aerial view of the project site and surrounding area.

1.3 Project Description

The Project would involve the construction of a 70-megawatt (MW) utility-scale solar facility on approximately 492 acres of the 520-acre site. The solar facility would consist of Photovoltaic (PV) modules and trackers, inverters and medium voltage transformers, Direct Current (DC) collection, on-site substation, battery storage, telecommunications, meteorological data collection, lighting signage, access roads, and gen-tie. The Project will interconnect at PG&E's Lakeview Substation via a 0.6-mile gen-tie line that will enter through the northwest corner of the substation property. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (i.e., Project site) would be less than the gross acreage of the Project area. Access to the site would be off of Copus Road and Old River Road. There would be approximately 14-acres of access and maintenance roads constructed on-site. Additional details about elements of the solar facility are provided in more detail below.

Figure 1 Regional Location



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Project Area

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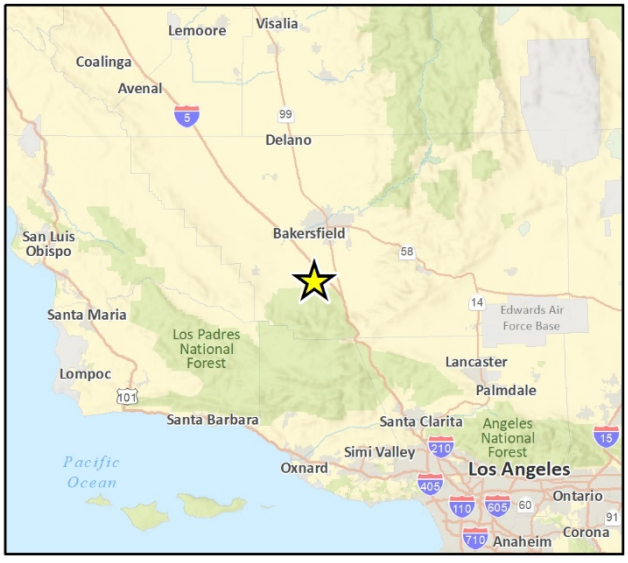
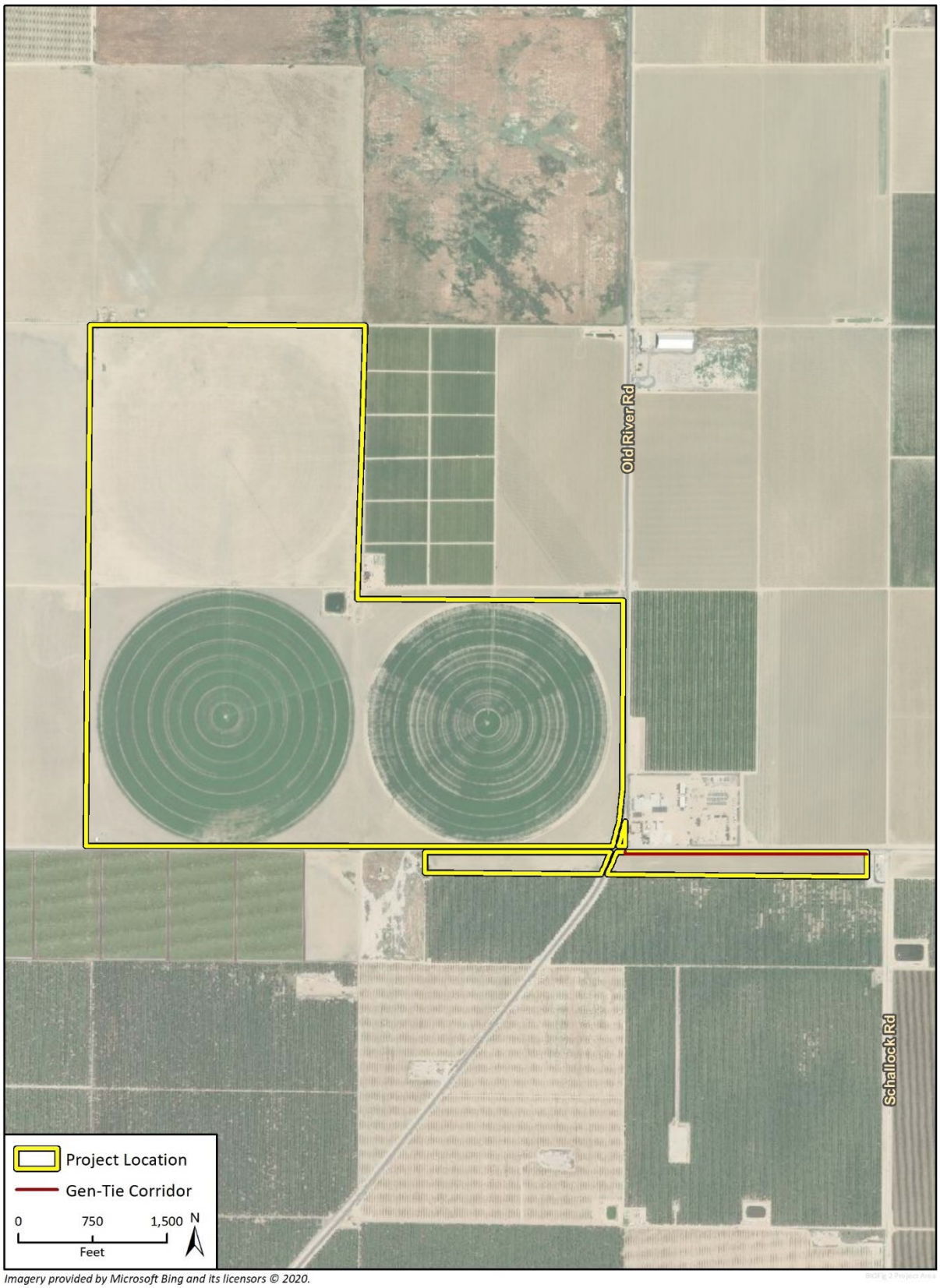


Figure 2 Project Site Location



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PV Module Configuration

The solar facility would utilize PV modules and trackers. Trackers optimize power production by ensuring proper panel orientation to the sun both daily and seasonally. The panels would be comprised of blue or black glass, with a plastic binding material and frame to provide structural rigidity. The PV panels would be self-contained durably constructed units designed to withstand exposure to the elements for a period of 35 years or longer. The solar modules would be certified to comply with industry standard quality testing. Panels would be electrically connected. The Project would be designed in accordance with local and state codes and regulations.

Multiple trackers would be deployed in proximity to the power conditioning stations (PCS) where the DC produced by the panels is converted to alternating current (AC) and transferred to the on-site Substation and eventual delivery to the electrical grid. The number of trackers connected to each of the PCS would vary with panel output relative to inverter size and desired output from the PCS. The panels would be organized in rows in a uniform grid pattern, with each row separated by between 10 to 20 feet (from post to post).

Inverters and Medium Voltage Transformers

Each PCS would be comprised of inverters, transformers, and other electrical equipment comprise. The footprint of each PCS, which is generally mounted on a concrete pad or piles, would be approximately 12 feet by 30 feet. The proposed Project would require approximately 40 PCS, depending on final design details. The inverter converts the DC electricity to AC electricity, which then flows to a transformer where it is stepped up to the appropriate collection level voltage (34.5-kV). The Project would use Power Electronic HEM Central inverters or equivalent and one medium voltage transformers per inverter. Each inverter and transformer would be installed as per manufacturer's requirements.

Electrical Collection and Distribution System

The DC output of multiple rows of PV modules connected in series would be collected through one or more combiner boxes and associated electrical wiring located throughout the Project site. The power would be delivered via an underground cable network to the inverters in the electrical equipment enclosures at the PCS, described above. Multiple transformers electrically connected in series would deliver AC power to the substation located on-site.

Project Substation

The substation is proposed to be in the southeast corner of APN 295-130-78. The substation would include transformers, breakers, switches, meters, and related equipment. Interconnection equipment, including the control house, would be installed aboveground and underground within the footprint of the substation. The overall footprint of the substation is anticipated to be approximately 200 by 200 feet and approximately 100 feet in height at its apex. The substation would include an emergency generator for use in the event that the regional transmission system fails; this emergency generator would provide emergency power until the regional transmission system restores operations. The substation would also contain a control house building approximately 15 by 40 feet with an overall height of less than 20 feet. The substation would be surrounded by a seven-foot barbed wire chain-link fence and would comply with electrical codes.

The substation would be required to have access to communication systems in the area to comply with Federal Energy Regulatory Commission/California Independent System Operator/Utility

monitoring and control requirements. Compliance may be accomplished by underground lines, aboveground lines, or wireless communication.

Lakeview Substation

The existing Lakeview Substation, operated by PG&E, would require modifications to accommodate a new 70 kV bus terminal. The new bus terminal will connect the proposed customer-owned photovoltaic solar Project to the existing transmission system via new generation tie-line. Additional electrical equipment, including Direct Transfer Trip equipment, Supervisory Control Data Acquisition and telemetry equipment, and breaker and control switching equipment, would be placed within the existing fenced area at the Lakeview Substation

Telecommunications

The Project would require redundant telecommunication connections. The primary telecommunication line would consist of fiber optic cable and/or copper telecommunication line, installed above and/or below ground, attached to either existing utility lines located outside of the Project or the new gen-tie. The Project's telecommunication route would use a combination of existing poles, new poles, and/or below ground installations between the point of connection to existing telecommunications infrastructure and the Lakeview Substation. Lines would be placed within utility franchise easements to the extent feasible. The point of interconnection to the existing telecommunication facilities would be within a small telecommunications shelter. The interconnection utility service would consist of fiber stranded cables (Dielectric Self Supporting and Optical Ground Wire) coming into the substations as part of the standard substation design criteria. Telecommunication lines may also be attached to the new gen-tie line. A secondary (backup) internet connection would be provided using a similar method for redundant paths. The site will also have internal telecommunications expected to be provided by the local provider in the area.

Meteorological Data Collection System

The Project would require up to four meteorological data collection systems. The systems, which would be mounted at various locations throughout the proposed solar facility, would include a variety of instruments to collect meteorological data. Meteorological data would be collected at approximately 15 feet above the ground (the maximum height of the solar panels).

Battery Storage Component

The proposed Project may include the installation of a battery storage component. The battery system would consist of commercially available lithium ion batteries housed in enclosures. The enclosures would be approximately 8 feet wide by 40 feet long by 9.5 feet high (2.4 meters wide by 12 meters long by 2.9 meters high). The battery storage component would have a footprint of approximately 1 acre and would be immediately adjacent to the Project's Substation. Site preparation required for the battery storage enclosures requires leveling the area for a flat concrete foundation.

Lighting and Signage

Low-level lighting may be installed at the entry gates, on-site substation, inverter pads, and operation and maintenance (O&M) Building for ongoing maintenance and security. Lighting outside of the substation would be downward facing, shielded or otherwise modified to minimize emission of light or glare beyond the property line, or upward into the sky.

Signage installed on the fence in the vicinity of the main entry gates would identify the Project owner, operator, and emergency contacts and provide safety and security information. Small-scale signage would be posted at the main entry gates and intermittently along the perimeter fencing on exterior parcel boundaries, to indicate “No Trespassing” and “Private Property” for security and safety purposes. All signage would conform to Kern County signage requirements.

Generation-Tie Line

The 70 kV gen-tie would interconnect the Project’s substation to the existing PG&E Lakeview Substation. The gen-tie is proposed to extend to the west from the Project Substation for approximately 0.60 miles. The gen-tie right-of way would be from 25- to 75-feet-wide. Approximately 25 new poles would be installed to accommodate the gen-tie. The new poles would be constructed of either steel or wood at a maximum of 125 feet tall.

Access Roads

The proposed Facility would be primarily accessed off Copus Rd and Old River Rd adjacent to the Project site and gen-tie corridor. Interior access within the solar array area would be approximately 20-foot-wide access and maintenance roads and perimeter roads. The access points and interior driveways would be constructed in accordance with Kern County and California Department of Forestry and Fire Protection requirements and maintained to facilitate on-site circulation for emergency vehicles during all weather conditions.

1.4 Construction

Construction of all Project components would occur over approximately 16 months, initiating in January 2023 with the facility placed into service by end of 2023 and final close out items completed in 2024. Construction of the Project would include the following types of activities:[1]

- Site preparation & Grading
- Tracker Foundations (Piles)
- Underground Cabling
- Mechanical Installation
- Electrical Installation
- PG&E Substation Upgrades

There would be six total phases with Phases 1 through 5 occurring over 12 months and Phase 6 taking approximately 16 months. Primary construction activities would take place during the first 12 months of construction; upgrades to the PG&E Substation would overlap with the other phases and are expected to take up to 16 months. Table 1 shows the assumed construction schedule, number of workdays, and overlapping phases that were used in the following analysis.

[1] The anticipated construction schedule and types of construction activities are subject to changing. However, for the purpose of this analysis, these phases are assumed to occur and overlap.

Table 1 Overall Project Construction Schedule

Scenario	Workdays	Months															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase 1: Site Preparation & Grading	60																
Phase 2: Tracker Foundations (Piles)	103																
Phase 3: Underground Cabling	86																
Phase 4: Mechanical Installation	103																
Phase 5: Electrical Installation	129																
Phase 6: PG&E Substation Upgrades	336																

Note: Majority of the construction would occur in a 12-month period (i.e., Phases 1 through 5). The 16-month schedule accommodates the PG&E substation modification and power line construction.

Construction traffic would access the Project site locally from Copus and Old River Road. It is estimated that the peak construction workforce would be 550 workers. On-road traffic would consist of employee and vendor vehicle trips. The number of vehicle trips would vary by month depending on the construction activities. The construction workforce would typically work five days per week at eight hour per day. Some Saturday, Sunday, evening, and night work may also be required due to the scheduling of system outages and construction schedules. Earthmoving activities are expected to be limited to the construction of access roads, O&M building, substation, energy storage systems, and control rooms.

Truck Deliveries

Materials and supplies would be delivered to the Project site by truck. Truck deliveries would normally occur during daylight hours. However, there could be offloading and/or transporting of materials to the Project site on weekends and during evening hours.

Water

The proposed Project would obtain water for construction from either existing wells or purchase water from a local provider. The water would be trucked and stored on-site to be primarily used for dust suppression, soil compaction, concrete hydration and other miscellaneous activities requiring non-potable water during construction. The Project will require an estimated 150 acre-feet of water for construction activities and 0.5 acre-feet of water per year during operations. Potable water for drinking and similar needs during construction would be trucked in from off-site (e.g., bottled water).

1.5 Operation and Maintenance

Once completed, the Project would generally be limited to the following maintenance activities:

- Cleaning PV panels
- Monitoring electricity generation
- Providing site security
- Maintaining the facility: replacing or repairing inverters, wiring, and PV modules
- Erosion control maintenance
- Restoration of vegetative cover and vegetation maintenance

The Project would operate continuously, seven days a week, until the anticipated repowering or decommissioning in 35 years. One employee would be assigned for operational maintenance and oversight. Personnel would largely work in the O&M building monitoring the system's performance and performing system production forecasting. Personnel would access on-site equipment for operational adjustments or minor repairs. Regular access throughout the day and night is expected. Personnel would use light to medium duty trucks and all-terrain vehicles for traversing the site along fire access roads, including drainage crossings. Security monitoring would occur on-site 24 hours a day. The facility would generate electricity during normal daylight hours when the solar energy is available. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available. The Project would require an estimated 150 acre-feet of water for construction activities and 0.5 acre-feet of water per year during operations.

1.6 Decommissioning Activities

The Project would be decommissioned after 35 years and the site would be reverted to undeveloped land. The decommissioning and restoration process would involve removing aboveground and belowground structures, restoring topsoil, revegetation, and seeding. Temporary erosion and sedimentation control Best Management Practices (BMPs) would be used during the decommissioning phase. Solar panels would be removed and placed in secure transport crates or container boxes for storage, and transported to another solar facility for reuse, material recycling, or disposal. Electrical equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment off-site. Electrical equipment, transformers, and switching gear on the inverter and interconnection transformer pads and all above ground electrical wiring would be removed and recycled or disposed. All other aboveground site infrastructure—including fences, awnings, and the concrete pads that supported the inverters, and related equipment—would be removed. The fence and gate would be removed per a fencing plan and may include the replacement of some perimeter array fencing with fencing to facilitate livestock management. Removed materials would be recycled to the greatest extent possible. All debris would be removed from the area.

2 Background

2.1 Overview of Energy

Energy use relates directly to environmental quality because it can adversely affect air quality and can generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to create electricity, heat and cool buildings, and power vehicles. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes such as auto, carpool, and public transit; and miles traveled by these modes.

Energy use is typically quantified using the British Thermal Units (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by 1 degree Fahrenheit. As points of reference, the approximate amount of energy contained in a cubic foot of natural gas, a kilowatt hour (kWh) of electricity, and a gallon of gasoline are 1,000 BTU, 3,400 BTU, and 123,000 BTU, respectively. Natural gas usage is expressed in U.S. therms with one U.S. therm equal to 100,000 Btu.

As a state, California is one of the lowest per capita energy users in the United States, ranked 50th in the nation in 2019, due to its energy efficiency programs and mild climate (United States Energy Information Administration [U.S. EIA] 2021a). Electricity and natural gas are primarily consumed by the built environment for lighting, appliances, heating and cooling systems, fireplaces, and other uses such as industrial processes in addition to being consumed by alternative fuel vehicles. Most of California's electricity is generated in-state with approximately 28 percent imported from the Northwest and Southwest in 2019; however, the state relies on out-of-state natural gas imports for nearly 90 percent of its supply (California Energy Commission [CEC] 2021a and 2021b). In 2019, California used 277,704 gigawatt-hours (GWh) of electricity; approximately 32 percent of California's electricity supply came from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2021a). In 2019, California also consumed approximately 13,158 million U.S. therms of natural gas (CEC 2021c).

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries. Gasoline is the most used transportation fuel in California with 15,365 million gallons sold in 2019 and is used by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2021d). Diesel is the second most-used fuel in California with 1,756 million gallons sold in 2019 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2021d). Both gasoline and diesel are primarily petroleum-based, and their consumption releases GHG emissions, including CO_2 and N_2O. The transportation sector is the single largest source of GHG emissions in California, accounting for 40 percent of all inventoried emissions in 2019 (California Air Resources Board [CARB] 2021).

2.2 Regional and Local Energy Setting

Energy Supply – Petroleum

California is one of the top producers of petroleum in the nation with drilling operations occurring throughout the state but concentrated primarily in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San

Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries depend increasingly on foreign imports. In 2020, California supplied 35 percent and Alaska supplied 18 percent of the total and the remaining 48 percent was supplied by foreign imports (CEC 2021b). According to the U.S. EIA, California's field production of crude oil totaled 143,114 thousand barrels in 2020 (U.S. EIA 2021b).

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. Their use is encouraged through various statewide regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill (SB) 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with alternative fuels such as hydrogen, biodiesel, and electricity. Currently, there are nine biodiesel refueling stations, 47 hydrogen refueling stations, and 33,596 electric vehicle supply equipment ports across California (U.S. DOE 2021). In addition, pursuant to Executive Order N-79-20, California has a goal that all new passenger vehicles sales by 2035 would be zero-emission vehicles (ZEV) and by 2045 all new medium- and heavy-duty vehicles would also be ZEV (Gee et al 2021.)

Energy Supply – Electricity

In 2020 California's in-state electricity generation totaled 190,913 GWh (CEC 2021a). Table 2 lists the fuel types and percentage contribution from each source for the 2020 total in-state generation.

Table 2 2020 California In-State Generation

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation
Non-Renewables		
Coal	317	0.17%
Natural Gas	92,298	48.35%
Oil	30	0.02%
Other (Waste Heat/Petroleum Coke)	384	0.20%
Nuclear	16,280	8.53%
Large Hydro	17,938	9.4%
Unspecified	–	0%
Total Non-Renewables and Unspecified Energy	**127,248**	**66.65%**
Renewables		
Biomass	5,680	2.97%
Geothermal	11,345	5.94%
Small Hydro	3,476	1.82%
Solar	29,456	15.43%
Wind	13,708	7.18%
Total Renewables	**63,665**	**33.35%**
Total System Energy	**190,913**	**100%**

Source: CEC 2021a

Pacific Gas & Electric

Pacific Gas & Electric (PG&E) is an investor-owned utility company that provides electricity and natural gas supplies. Operating characteristics of PG&E's electricity and natural gas supply and distribution systems are provided below.

PG&E Utility Operations

PG&E provides "bundled" services (i.e., generation, transmission, and distribution services) to most of the six million customers in its service territory, including residential, commercial, industrial, and agricultural consumers. Customers can obtain electricity from alternative providers such as municipalities or Customer Choice Aggregators, and from distributed-generation resources, such as rooftop solar installations.

In recent years, PG&E has improved its electric transmission and distribution systems to integrate new renewable energy resources, distributed generation resources, and energy storage facilities, and to help create a platform for the development of new Smart Grid technologies. In 2020, PG&E generated and/or procured 35,838 GWh of electricity (PG&E 2021). Table 3 itemizes the percentage of PG&E's total deliveries of electricity to customers in 2020, represented by each major electricity resource.

Table 3 PG&E's Percent of Bundled Retail Sales in 2020

Energy Type	Percent of Bundled Retail Sales in 2020
PG&E-Owned Generation Facilities	
Renewable[1]	1.3%
Nuclear	42.8%
Large Hydroelectric	9.7%
Fossil Fuel-Fired[2]	17.9%
Other Third-Party Purchase Agreements	**46.3%**
Renewable[1]	34.3
Large Hydroelectric	0.5
Fossil Fuel-Fired[2]	18.0
Others, Net[3,4]	(10.6%)
Total	**100%**
Total Renewable Energy Resources[1]	**35.6%**

[1]Amounts include biopower (e.g., biogas, biomass), solar, wind, certain hydroelectric (i.e., 30MW or less), and geothermal facilities.

[2] Amounts consist primarily of natural gas facilities.

[3]The allocation of "Others, Net" is consistent with CEC guidelines, applied to specified electric generation and procurement volumes (i.e., fossil fuel-fired, nuclear, large hydroelectric, and renewable). Total reported generation and procurement volumes equate to actual electric retail sales.

[4] Amount is mainly comprised of net California Independent System Operator (CAISO) open market purchases.

Source: PG&E 2021

Renewable Energy Resources

SB 100 requires electricity providers, such as PG&E, to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. Renewable generation resources, for purposes of the RPS program, include bioenergy such as biogas and biomass, certain hydroelectric facilities (30 MW or less), wind, solar,

and geothermal energy. As shown in Table 4 during 2020, 36 percent of PG&E's energy deliveries were from renewable energy sources, exceeding the 2020 RPS target of 33 percent (PG&E 2021).

Table 4 PG&E's Percent of Bundled Retail Sales in 2020 – Renewable Sources

Source	Percent of Bundled Retail Sales in 2020
Bioenergy	2.8
Geothermal	2.6
RPS-Eligible Hydroelectric	1.2
Solar	16.1
Wind	12.9
Total	**35.6**

Source: PG&E 2021

Energy Demand – Electricity

State

California consumed approximately 279,402 GWh in 2019. Residential electricity demand accounted for approximately 33 percent of California's electricity consumption, and non-residential demand account for approximately 67 percent (CEC 2021e).

PG&E Service Area

Electricity consumption in within the PG&E service is provide for regional and statewide context. As shown in Table 5, the PG&E service area consumed approximately 78,071 GWh in 2019, which was approximately 28 percent of statewide electricity consumption (CEC 2021f).

Table 5 2019 Electricity Consumption in the PG&E Service Area

Utility	Year	Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Streetlight	Total Usage
PG&E	2019	4,490	29,559	4,349	9,710	1,642	28,015	308	78,071

Source: CEC 2021e

Energy Demand - Petroleum

State

In 2019, transportation accounted for 39 percent of California's total energy demand, amounting to approximately 3,073 trillion Btu (U.S. EIA 2021c). California's transportation sector, including rail and aviation, consumed roughly 565,056 thousand barrels of petroleum fuels in 2019. In 2017, petroleum-based fuels were used for approximately 98 percent of the state's total transportation activity (U.S. EIA 2021).

Supply

California is nearly self-sufficient with regard to the gasoline and diesel fuel supply, obtaining almost all of the supply to meet local demand from the California refineries. Refineries in California often operate at or near maximum capacity because of the high demand for petroleum products. When unplanned refinery outages occur, replacement supplies must be brought in by marine tanker from refineries in the state of Washington or on the U.S. Gulf Coast. California requires all motorists use, at a minimum, a specific blend of motor gasoline called California Reformulated Gasoline, as part of an overall program to reduce emissions from motor vehicles. Refineries in several other countries can also supply California Reformulated Gasoline. However, locating and transporting replacement motor gasoline that conforms to California's strict fuel specifications from overseas can take several weeks (U.S. EIA 2021a). Because of this, unplanned outages often result in a reduction in supply that causes prices to increase. The energy industry resolves most petroleum supply disruptions or shortage events before they become significant (National Association of State Energy Officials 2018).

Consumption and Distribution

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2021b). Diesel fuel is the second largest transportation fuel used in California, representing 17 percent of total fuel sales behind gasoline. Nearly all heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction vehicles, and heavy-duty military vehicles and equipment have diesel engines. Diesel is the fuel of choice for this equipment because it has 12 percent more energy per gallon than gasoline and has fuel properties that prolong engine life making it ideal for heavy-duty vehicle applications (CEC 2021b).

2.3 Regulatory Setting

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce the United States' dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels
- Reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon (mpg) by 2020 – an increase in fuel economy standards of 40 percent

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 USC Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA), a part of the United States Department of Transportation (U.S. DOT), for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (USEPA) administers the Corporate Average Fuel Economy (CAFE) program (discussed below), which determines vehicle manufacturers' compliance with existing fuel economy standards.

Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act in 1975 established CAFE standards, which are Federal rules established by NHTSA that set fuel economy standards for all new passenger cars and light trucks sold in the United States. The CAFE standards become more stringent each year, reaching an estimated 38.3 miles per gallon for the combined industry-wide fleet for model year 2020 (77 Federal Register 62624 et seq. [October 15, 2012 Table I-1). It is, however, illegal for individual municipalities to adopt more stringent fuel efficiency standards. The Clean Air Act (CAA) (42 United States Code [USC] Section 7543[a]) states that "no state or any political subdivision therefore shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part."

In August 2016, the USEPA and NHTSA announced the adoption of the phase two programs related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi- trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower carbon dioxide (CO_2) emissions by approximately 1.1 billion metric tons (MT) of CO_2 and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program (NHSTA 2021).

The NHTSA and the USEPA jointly published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" in September 2019 and issued the Final SAFE Rule (i.e., SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks) in April 2020. The SAFE Vehicle Rule relaxes federal CAFE vehicle standards and revokes California's authority to set its own vehicle standards.

Construction Equipment Fuel Efficiency Standard

The USEPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were to be completely phased in by the end of 2015.

State

Assembly Bill 2076

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and CARB prepared and adopted a joint-agency report, Reducing California's Petroleum Dependence, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled (VMT). One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouragement of urban designs that reduce vehicle miles travelled and accommodate pedestrian and bicycle access.

Reducing California's Petroleum Dependence (Assembly Bill 2076)

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), the CEC and CARB prepared and adopted a joint-agency report, *Reducing California's Petroleum Dependence,* in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles travelled. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

Senate Bill 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the *2018 Integrated Energy Policy Report*, contains two volumes. Volume I highlights implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, adopted February 20, 2019, provides more detail on several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system.

California Renewable Portfolio Standard and Senate Bill 100

Established in 2002 under SB 1078, and accelerated by SB 107 (2006), SB X 1-2 (2011), and SB 100 (2018), California's Renewable Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent total retail sales of electricity from renewable energy sources by 2020, 60 percent by 2030, and 100 percent by 2045. SB 100 also states "that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045." The California Public Utilities Commission and the CEC are jointly responsible for implementing the program.

Pavley Standards (Assembly Bill 1493)

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley bill, amended Health and Safety Code sections 42823 and 43018.5, thereby requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the state apply for a waiver under the federal Clean Air Act. Although the USEPA initially denied the waiver in 2008, the USEPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

Energy Action Plan

In the October 2005, the CEC and California Public Utilities Commission updated their energy policy vision by adding some important dimensions to the policy areas included in the original Energy Action Plan, such as the emerging importance of climate change, transportation-related energy issues. and research and development activities. The CEC adopted an update to the Energy Action Plan II in February 2008 that supplements the earlier energy action plans and examines the state's ongoing actions in the context of global climate change.

State Alternative Fuels Plan (Assembly Bill 1007)

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, state, and local agencies. The Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan (Executive Order S-06-06)

Executive Order (EO) S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California

while providing environmental protection and mitigation. The EO establishes the following targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updated the 2011 Plan and provided a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations

Updated every three years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code).

PART 6 (BUILDING ENERGY EFFICIENCY STANDARDS)

Part 6 of Title 24 contains the 2016 Building Energy Efficiency Standards for new residential and CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The most current standards are the 2019 Title 24 standards (CEC 2018a). The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018). Under the 2019 Standards, nonresidential buildings will be 30 percent more energy-efficient compared to the 2016 Standards (CEC 2018b).

PART 11 (CALGREEN)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the CALGreen became effective January 1, 2011 and were updated in 2016. The 2016 Standards, which became effective on January 1, 2017, establish green building criteria for residential and nonresidential projects. The CEC adopted updates to the 2016 Standards in 2019 that took effect on January 1, 2020.

Local

Kern County General Plan

The goals, policies, and implementation measures in the Energy Element of the Kern County General Plan (Kern County 2009) applicable to energy, as related to the project, are provided below.

- **Policy 1**: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuel and improve air quality.
- **Policy 3**: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.

3 Impact Analysis

3.1 CEQA Checklist

The following analysis is provided to support environmental documentation pursuant to CEQA. The conclusions of the study are summarized in Table 6.

Table 6 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance	Applicable Mitigation Measures
Energy		
Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than significant impact	None
Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact	None

3.2 Methodology

This impact analysis evaluates the potential for the Project to result in a substantial increase in energy demand and/or wasteful use of energy during the construction, operation and maintenance, and decommissioning of the solar facility. The analysis includes the estimated energy consumption from Project construction and operation, and it is informed by Appendix G of the CEQA Guidelines. The potential impacts are analyzed based on an evaluation of whether construction, operation and maintenance, and decommissioning energy use estimates for the solar facility would be considered Wasteful, inefficient, or unnecessary. The fact that the solar facility would be providing a new source of renewable energy is also taken into account.

Construction energy demand accounts for anticipated energy consumption during Project construction, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from the Project site. Operational energy demand accounts for the anticipated energy consumption during Project operation, such as fuel consumed by employee and delivery vehicle trips to and from the Project site. The analysis in this section utilizes the assumptions identified in the Jasmine Solar Air Quality and Greenhouse Gas Technical Study prepared by Rincon Consultants, Inc. (2021). The following construction and operational sources and activities were analyzed for emissions:

- **On-site construction equipment fuel consumption**: Based on CARB's OFF-ROAD equipment 2017 model (OFFROAD2017) and the EMission FACtor 2017 model (EMFAC2017) emission factors and estimated equipment schedules.[2]
- **On-site and off-site haul truck (includes delivery, freight, and dump/water trucks) fuel consumption**: Based on EMFAC2017 and estimated vehicle miles traveled. The sub-area of Kern (San Joaquin Valley), the calendar year of 2022, aggregate model year, aggregate speed, and the EMFAC 2007 vehicle categories were used for the EMFAC2017 output.

[2] The EMFAC2017 model was used since this is the latest USEPA approved version of EMFAC.

- **Worker vehicle emissions for trips to and from the site:** Based on EMFAC2017 and estimated vehicle miles traveled provided by the Project applicant.

Construction

The approximate amount of diesel and gasoline fuel consumed during construction was estimated using the Project-specific construction schedule, equipment, and number of trips anticipated. The OFFROAD2017 model provides the rates for fuel use (gallons per year) and activity hours (hours per year), which were then used to develop a gallons per hour fuel consumption rate. The total hourly usage for each piece of construction equipment was estimated by multiplying the operating hours by the total number of workdays in the construction phase. The total diesel fuel consumption was then calculated by multiplying the fuel consumption rate and the total hourly usage for each piece of construction equipment.

To calculate the diesel and gasoline fuel that would be consumed from construction vehicle trips, the fuel consumption rate (1,000 gallons per day) from the EMFAC2017 model was converted into an average fuel economy rate (miles per gallon) for diesel and gasoline using the provided VMT for each vehicle category. The anticipated gallons of diesel and gasoline consumed was then calculated using the average fuel economy rates and the calculated daily VMT for onsite and on-road travel.

Operation

For operation, the same methodology with the EMFAC 2017 model and output were used to compute fuel consumption from the O&M employee and deliveries. As described in Section 1.5, *Operation and Maintenance*, only one employee would be needed for O&M and there would be daily deliveries. There would a total of eight daily trips from operational activities. The size of the O&M building is yet to be determined. For the purpose of this analysis it was assumed to be approximately 1,000 square feet. The California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to estimate operational energy consumption for a 1,000-square foot O&M building using default demand factors for a “General Light Industrial” building. Operation and maintenance activities would require the use of vehicles and equipment including trucks for routine activities and periodic module washing, mowers or other vegetation management equipment, and additional periodic maintenance equipment such as all-terrain vehicles, tractors, portable generators, and portable water trailers. No heavy equipment would be used during normal facility operation. Additionally, the Project would include one emergency diesel generator onsite at the substation. In lieu of Project-specific information, the generator was assumed to be approximately 1,000 kW and operation information was taken from a Generac SD1000 1,000 kW industrial diesel generator set spec sheet (Generac 2021). For 24 hours, the useable capacity of the fuel tank would be approximately 1,900 gallons.

3.3 Significance Thresholds

According to Appendix G of the CEQA Guidelines, an energy-related impact would be considered significant if the project would result in one or more of the following conditions:

- Wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation;
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

3.4 Energy Impact Analysis

Threshold 1:	Would the proposed project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or decommissioning?

Impact E-1 THE PROJECT WOULD NOT RESULT IN WASTEFUL, INEFFICIENT, AND UNNECESSARY ENERGY CONSUMPTION DURING CONSTRUCTION, OPERATION, OR DECOMMISSIONING. MOREOVER, THE PROJECT WOULD RESULT IN A DECREASE IN FUEL USE FOR POWER GENERATION BY PROVIDING A RENEWABLE SOURCE OF ENERGY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Wasteful, Inefficient, and Unnecessary Consumption of Energy

Construction

Project construction would require energy resources primarily in the form of fuel consumption to operate heavy equipment and vehicles. Construction of the Project would also result in fuel consumption from the use of construction tools and equipment, haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Temporary power may also be provided for construction trailers and electric construction equipment. Table 7 summarizes the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the Project site. As shown therein, construction activities would result in the consumption of 165,927 gallons of diesel fuel from construction equipment and vendor, hauling, and water truck trips, and approximately 29,853 gallons of gasoline from construction worker vehicle trips.

Table 7 Project Construction Energy Usage – Fuel Consumption

Phase	Construction Equipment (Gallons of Diesel)	On-Road Mobile Trips (Gallons of Diesel)	On-Site Mobile Trips (Gallons of Diesel)	Total Gallons of Diesel	On-Road Mobile Trips (Gallons of Gasoline)	On-Site Mobile Trips (Gallons of Gasoline)	Total Gallons of Gasoline
Phase 1 Site Preparation & Grading	18,191	711	425	19,326	1,928	193	2,121
Phase 2 Tracker Foundations (Piles)	48,256	1,082	727	50,064	4,542	132	4,674
Phase 3 (Underground Cabling)	20,764	526	243	21,533	1,655	83	1,738
Phase 4 Mechanical Installation	28,308	1,143	728	30,178	4,954	264	5,218
Phase 5 Electrical Installation	32,897	806	366	34,069	5,162	207	5,369
Phase 6 PG&E Substation Upgrades	9,508	2,219	966	12,693	1,683	650	2,333
Total	157,923	6,487	3,454	167,864	19,925	1,529	21,453

See Appendix A in the Air Quality and Greenhouse Gas Technical Report (Rincon 2021).

Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel and heavy-duty equipment would not be a typical condition of the Project. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. Furthermore, per applicable regulatory requirements such as 2019 CALGreen, the Project would comply with construction waste management practices to divert a minimum of 65 percent of construction debris. These practices would result in efficient use of energy necessary to construct the Project. In the interest of cost-efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, the Project would not involve the inefficient, wasteful, and unnecessary use of energy during construction. Impacts related to Project construction would be less than significant.

Operation and Maintenance

Operation of the Project would consume electricity, and gasoline and diesel fuels. Electricity would be used for lighting, appliances, and water and wastewater conveyance at the O&M building, among other purposes. Gasoline and diesel consumption would be associated with vehicle trips generated by customers and employees. The Project would use no process gas for the power generation process and would have no impact on natural gas supplies.

Electricity would be consumed by the Project to operate facility lights and an O&M building to accommodate one permanent staff member. The Project would receive service power from PG&E.. The Project would also include one diesel-fired emergency generator at the on-site substation for use in the event that the regional transmission system fails; this emergency generator would provide emergency power until the regional transmission system restores operations. The generator would be designed to provide up to 24 hours of emergency generation at full demand. Testing of the generator would occur no more than 100 hours annually, per the San Joaquin Valley Air Pollution Control District's *Rule 4207 Internal Combustion Engines* (2013). Assuming that approximately 79 gallons of diesel fuel are required per hour to test generators at full load, the backup generator testing would require approximately 15,800 gallons annually.[3]

Table 8 summarizes estimated operational energy consumption for the proposed Project. As shown therein, operation would require approximately 1,553 gallons of gasoline and 2,361 gallons of diesel for transportation fuels, and 0.01 GWh of electricity. The emergency diesel generator would require approximately 15,833 gallons of diesel per year. Testing and maintenance of the emergency diesel generator would represent the greatest operational use of energy associated with the proposed Project.

Table 8 Estimated Project Annual Operational Energy Consumption

Source	Energy Consumption[1]	
Transportation Fuels		
Gasoline	1,553 gallons	170 MMBtu
Diesel	2,361 gallons	301 MMBtu
Electricity	0.01 GWh	29 MMBtu

[3] Calculation: 79 gallons * 100 hours for testing and maintenance = 15,833 gallons

Source	Energy Consumption[1]	
Emergency Diesel Generator	15,833 gallons	1,007 MMBtu

MMBtu = million metric British thermal units; GWh = gigawatt-hours

[1] Energy consumption is converted to MMBtu for each source

See Appendix A for energy calculation sheets and CalEEMod output results for electricity and natural gas usage.

The Project's O&M Building would be required to comply with all standards set in the latest iteration of the California Building Standards Code (California Code of Regulations Title 24), which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources by the built environment during operation. This standard is specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. In addition, maintenance and emergency use of the backup generator would not result in the wasteful, inefficient, or unnecessary consumption of energy because routine maintenance would be conducted periodically based on the minimum requirements to ensure reliability and operation would only occur during infrequent extended power outage events. Lastly, during operation, only one employee would be required onsite fulltime with occasional deliveries and visitors. The amount of vehicle fuel consumed would be minimal due to the few number of daily trips anticipated. Therefore, project operation would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Project operation impacts would be less than significant.

Displaced Energy Production

Using the installed photovoltaic capacity of 70 MW (70,000 kW) AC, the solar facility would generate approximately 156,621,500 kWh per year, which would replace approximately 1,566,215 MMBtu of fuel use for power generation. Thus, the minimal amount of electricity required during Project operation would be substantially offset by the generation of electricity from the solar facility.

Decommissioning

The solar facility is anticipated to be in commercial operation for approximately 35 years. After this time, decommissioning would occur in accordance with the Kern County Planning and Community Development Department requirements and would involve the removal of all above-grade facilities, buried electrical conduit, and all concrete foundations in keeping with the approved reclamation plan. These activities are assumed to include the use of similar equipment as for construction activities; therefore, similar energy impacts would be expected. Decommissioning activities and corresponding fuel energy consumption would be temporary and could be comparable to the construction-related fuel demand; decommissioning-related fuel use also would not represent a substantial demand on energy resources. Thus, decommissioning-related fuel consumption by the Project would not result in inefficient, wasteful, or unnecessary energy. Impacts from decommissioning would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2:	Would the proposed project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 THE PROJECT IS A RENEWABLE ENERGY PROJECT THAT WOULD NOT CONFLICT WITH OR OBSTRUCT THE GOALS OF SB 100. NO IMPACTS WOULD OCCUR.

Conflict with State or Local Plans for Renewable Energy or Energy Efficiency

Several plans and policies have been adopted to reduce energy impacts in California and in Kern County, including SB 100 and local policies contained in the Kern County General Plan (2009). The Project's consistency with these plans is discussed in the following subsections. Since the solar facility would provide a new source of renewable energy in support of the state's energy goals, offset its fuel usage, and comply with fuel and energy efficiency regulations, it would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

SB 100

The Project involves the construction, operation, and decommissioning of a solar facility that would produce a new renewable source of energy in Kern County over a 35-year lifetime. The solar facility would directly support the SB 100 RPS goal of increasing the percentage of electricity procured from renewable sources.

The operation of the solar facility would require diesel and gasoline fuel, and minimal amounts of electricity through its life. The Project would generate minimal mobile trips totaling approximately eight daily trips. The O&M building on the Project site would be subject to the latest Title 24, Part 6 Building Energy Efficiency Standards. Additionally, these energy inputs would be offset by the anticipated generation of approximately 156,621,500 kWh per year.

Kern County General Plan

Kern County has not adopted any specific renewable energy or energy efficiency plan. However, the Kern County General Plan (2009) includes goals and policies related to solar energy development in the Energy Element. Table 9 summarizes the Project's consistency with applicable General Plan policies. As summarized therein, the Project would be consistent with the applicable goals and policies of the General Plan.

Table 9 Project Consistency with Applicable General Plan Policies

Policy	Consistency
General Policies in the Energy Element	
7. The processing of all discretionary energy project proposals shall comply with California Environmental Quality Act (CEQA) Guidelines directing that the environmental effects of a project must be taken into account as part of project consideration.	The Project will comply with CEQA, and the appropriate environmental documentation will be prepared to demonstrate that all environmental impacts due to the construction and operation of the project would be less than significant. In the instances where impacts would be possibly significant, mitigation measures would be included to reduce impacts to the greatest extent feasible.
Solar Energy Development Policies	

Policy	Consistency
1. The County shall encourage domestic and commercial solar energy uses to conserve fossil fuel and improve air quality.	The Project involves the construction and operation of a 70 MW solar facility in unincorporated Kern County. The solar facility would generate 156,621,500 kWh per year, which would be a new source of renewable energy that would be delivered to the State electrical grid. Creating a new source of renewable energy would decrease usage of fossil fuels for electricity generation and indirectly improve air quality due to less combustion of fossil fuels.

Source: Kern County 2009

Mitigation Measures

No mitigation is required.

Significance After Mitigation

No impact would occur without mitigation.

4 Conclusions and Mitigation Measures

The Project would not result in the wasteful, inefficient, or unnecessary use of energy, nor would it conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No mitigation measures are recommended.

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Appendix A

Energy Calculation Sheets

Jasmine Solar PV (492 Acres, 70 MW)

On-site Mobile Emissions (max 15 mph)

Activity 1 - Site Preparation and Grading				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	10	60	10	5,999	1	192
Vendors (Trucks)						
Water Trucks (HHDT)	1	60	50	3,000	422	0
T6 (MHDT)	2	60	0.10	12	1	0
			AVG EMISSIONS PER DAY		**7**	**3**
			TOTAL	**9,010**	**425**	**193**

Activity 2 - Tracker Foundations				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	4	103	10	4,114	1	132
Vendors (Trucks)						
Water Trucks (HHDT)	1	103	50	5,142	724	0
T6 (MHDT)	2	103	0.10	21	2	0
			AVG EMISSIONS PER DAY		**7**	**1**
			TOTAL	**5,163**	**727**	**132**

Activity 3 - Underground Cabling				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	3	86	10	2,571	1	82
Vendors (Trucks)						
Water Trucks (HHDT)	1	86	20	1,714	241	0
T6 (MHDT)	2	86	0.10	17	2	0
			AVG EMISSIONS PER DAY		**3**	**1**
			TOTAL	**1,731**	**243**	**83**

Activity 4 - Mechanical Installation				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	8	103	10	8,227	2	264
Vendors (Trucks)						
Water Trucks (HHDT)	1	103	50	5,142	724	0
T6 (MHDT)	2	103	0.10	21	2	0
			AVG EMISSIONS PER DAY		**7**	**3**
			TOTAL	**5,163**	**728**	**264**

Activity 5 - Electrical Installation				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	5	129	10	6,428	1	206
Vendors (Trucks)						
Water Trucks (HHDT)	1	129	20	2,571	362	0
T6 (MHDT)	2	129	0.10	26	2	1
			AVG EMISSIONS PER DAY		**3**	**2**
			TOTAL	**2,597**	**366**	**207**

Activity 6 - PG&E Substation				No. Days in Phase:	Fuel Consumption	
Vehicle Type	No. Units/Trips per Day	Days Operating	Total Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
On-site Worker Truck						
Light Duty Truck (LDT2)	6	336	10	20,160	4	646
Vendors (Trucks)						
Water Trucks (HHDT)	1	336	20	6,720	946	0
T6 (MHDT)	5	336	0.10	168	16	3
			AVG EMISSIONS PER DAY		**3**	**2**
			TOTAL	**6,888**	**966**	**650**

Fuel Consumption	
Diesel (gallons)	Gasoline (gallons)
3,454	**1,529**

Operational				No. Work days in Year:	Fuel Consumption	
Vehicle Type	Trips per Day	No. of Daily Trips (one-way)	Daily VMT	Annual VMT	Diesel (gallons)	Gasoline (gallons)
Pickup Trucks (LDT2)	2.0	2	4	1,000	0	40
				Avg Daily Emissions	**0**	**0**
				Annual Total Emissions	**0**	**40**

NOTES

1 lb = 453.59 grams; MT = metric tons

1. Data provided by SF Jasmine LLC indicates that on-site worker vehicles will travel 10 miles on site daily. The access driveway from either Copus Rd or Old River Rd would include construction of turn pockets for exit and entry to facilitate the delivery of equipment and personnel to the proposed Facility during construction and operations. As such it is assumed that delivery vehicles will not travel on-site, and workers commuter vehicles are assumed to not be driven on the project site accept for accessing the on-site parking lots will be at or near the main access site for the project.
2. Emission calculations include running emissions; start emissions, hotsoak, and running losses for a single trip; diurnal, and resting loss emissions per vehicle.
3. Emissions for 2023 calcualted using the same construction days/schedule as provided by project applicant
4. Emissions for 2024 calculated using the same construction days/schedule asa provided by project applicant
5. Operational trip information based on trip generation information provided GHD, January 2021.

(14 acres of access road = 5.8 miles of 20 ft wide road)

Jasmine Solar PV (492 Acres, 70 MW)

On-Road Mobile Emissions (55 mph)[1]

Activity 1 - Site Preparation and Grading						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	10						
Water Trucks (HHDT)	0.5	0.5	1.0	50	50	7	0
T6 (MHDT)	1	1	2	2	4	0	0
T7 (HHDT)	8	8	15	2	30	4	0
Employee Commute							
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	20	20	40	25	1,000	0	32
					Daily Emissions[7]	**12**	**32**
	No. of Days:	60			*Total Activity 1 Emissions:*	**711**	**1,928**
		600					

Activity 2 - Tracker Foundations						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	7						
Water Trucks (HHDT)	0.5	0.5	1.0	50	50	7	0
T6 (MHDT)	1	1	2	2	4	0	0
T7 (HHDT)	5	5	10	2	20	3	0
Employee Commute							
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	28	28	55	25	1,375	0	44
					Daily Emissions[7]	**11**	**44**
	No. of Days:	103			*Total Activity 2 Emissions:*	**1,082**	**4,542**
		720					

Activity 3 - Underground Cabling						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	7						
Water Trucks (HHDT)	1	0.5	1.0	20.0	20	3	0
T6 (MHDT)	1	1	2	2	4	0	0
T7 (HHDT)	5	5	10	2	20	3	0
Employee Commute							
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	12	12	24	25	600	0	19
					Daily Emissions[7]	**6**	**19**
	No. of Days:	86			*Total Activity 3 Emissions*	**526**	**1,655**
		600					

Activity 4 - Mechanical Installation						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	8						
Water Trucks (HHDT)	1	0.5	1.0	50.0	50	7	0
T6 (MHDT)	1	1	2	2	4	0	0
T7 (HHDT)	6	6	12	2	24	3	0
Employee Commute							
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	30	30	60	25	1,500	0	48
					Daily Emissions[7]	**11**	**48**
	No. of Days:	103			*Total Activity 4 Emissions:*	**1,143**	**4,954**

Activity 5 - Electrical Installation						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	7						
Water Trucks (HHDT)	1	0.5	1.0	20.0	20	3	0
T6 (MHDT)	1	1	2	2	4	0	0
T7 (HHDT)	5	5	10	2	20	3	0
Employee Commute	28						
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	25	25	50	25	1,250	0	40
					Daily Emissions[7]	**6**	**40**
	No. of Days:	129			*Total Activity 5 Emissions:*	**806**	**5,162**

Activity 6 - PG&E Substation						Fuel Consumption	
Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	Total No. of Trips	Average Miles per Trip[5,6]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (gallons)
Within Kern County (SJVAPCD)							
Vendors (Trucks)	9						
Water Trucks (HHDT)	1	0.5	1.0	20	20	3	0
T6 (MHDT)	3	3	5	2	10	1	0
T7 (HHDT)	5	5	10	2	20	3	0
Employee Commute							
Passenger Vehicle (LDA)+ Light-Duty Truck (LDT2)	3	3	6	25	150	0	5
					Daily Emissions[7]	**7**	**5**
	No. of Days:	336			*Total Activity 6 Emissions:*	**2,219**	**1,683**

Operation[8]	No. Work days in Year:	250				Fuel Consumption	
Vehicle Type	Trips to Site (Daily)	Trips from Site (Daily)	Total No. of Trips	Average Miles per Trip (one way trip) [9, 10, 11]	Daily Vehicle Miles Traveled	Diesel (gallons)	Gasoline (Gallons)
Employee Commute							
Light-duty Truck (LDT2)	2	2	4	25	100	0	4
Equipment/Material Delivery (T6)	2.0	2.0	4.0	25	100	9	2
					Daily Operational On-road Emissions	**9**	**6**
					Annual Operational On-road Emissions	**2,360**	**1,512**

Fuel Consumption	
Diesel (gallons)	Gasoline (gallons)
6,487	**19,925**

Note: 1 lb = 453.59 grams; MT = metric tons

1. On-road emissions use mileage to determine running emissions from associated with vendor vehicles coming to the site. Starting and additional emissions for vendor vehicles are not included here, and are included with on-site emissions. Emissions from employee commute vehicles assume only one trip to the site per day occur. On-road emissions for
2. It is assumed that the vendor trips are done by T6 trucks (MHDT)
3. To more accurately represent the type of vehicles used by employees for commuting it is assumed that 73% of the vehicles are light-duty automobiles (LDA) and 27% is light-duty trucks (LDT2). Percentages were derived from the distribution of gasoline powered LDA and LDT2 VMT from EMFAC2017.
4. Daily trips for construction based on Traffic Assessment prepared by GHD. One-way trip lengths
5. Assuming that HHDT vendor trips travel 50 mile (based on water truck information)
6. Assuming HHDT vendors and employees daily VMT is equal to the total daily mileage provided.
7. On-road emissions are calculated using emission factors that weighted based on the type of fuel used per vehicle class indicated in EMFAC2017 by sub-area.
8. Operational trip information was not available therefore assumptions were made assuming that daily operations would be similar to the Eland Solar project and that there would be 20 full-time employees and have the same operational emissions.
9. Trip data is based on information provided by the project applicant. One sole employee for O&M
10. Assumed that vendors are coming from Bakfersfield, approximately 25 miles from the project site. There would be a total of 4 trips generated (2 to site and 2 from site)
11. Assumed that employees are coming from within a 25 mile radius of the project site from Bakersfield. A total of 4 trips would be generated (2 to site and 2 from site)

Project Construction Energy Usage – Fuel Consumption

Phase	Construction Equipment (Gallons of Diesel)	On-Road Mobile Trips (Gallons of Diesel)	On-Site Mobile Trips (Gallons of Diesel)	Total Gallons of Diesel	On-Road Mobile Trips (Gallons of Gasoline)	On-Site Mobile Trips (Gallons of Gasoline)	Total Gallons of Gasoline
Phase 1 Site Preparation & Grading	18,191	711	425	19,326	1,928	193	2,121
Phase 2 Tracker Foundations (Piles)	48,256	1,082	727	50,064	4,542	132	4,674
Phase 3 (Underground Cabling)	20,764	526	243	21,533	1,655	83	1,738
Phase 4 Mechanical Installation	28,308	1,143	728	30,178	4,954	264	5,218
Phase 5 Electrical Installation	32,897	806	366	34,069	5,162	207	5,369
Phase 6 PG&E Substation Upgrades	9,508	2,219	966	12,693	1,683	650	2,333
Total	157,923	6,487	3,454	167,864	19,925	1,529	21,453

Estimated Project Annual Operational Energy Consumption

	Energy Consumption[1]	
Transportation Fuels		
Gasoline	1,553	170.46
Diesel	2,361	300.89
Electricity from O&M Building	0.009	29.38

MMBtu = million metric British thermal units; GWh = gigawatt-hours

[1] Energy consumption is converted to MMBtu for each source

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Jasmine Solar Energy Model

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Energy model for the O&M Building

Land Use - Assuming the O&M building is 1,000 feet

Construction Phase - No construction modeling

Vehicle Trips - Calculating mobile emissions off-model

Energy Use - No natural gas

Water And Wastewater - No septic tanks

Solid Waste - Site would not generate solid waste

Stationary Sources - Emergency Generators and Fire Pumps - Assuming a large diesel emergency generator (1,000 kW) and 100 hours per year for testing and maintenance

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24NG	16.86	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,000.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	4.6000e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0	0	2.00E-05
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.7966	0.7966	1.30E-04	2.00E-05	0.8045
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Stationary	0.0820	0.3669	0.2092	3.9000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	38.0797	38.0797	5.34E-03	0	38.2132
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0
Water						0.0000	0.0000		0.0000	0.0000	0.0818	0.1158	0.1976	2.16E-03	1.80E-04	0.3052
Total	**0.0866**	**0.3669**	**0.2092**	**3.9000e-004**	**0.0000**	**0.0121**	**0.0121**	**0.0000**	**0.0121**	**0.0121**	**0.0818**	**38.9921**	**39.0740**	**7.63E-03**	**2.00E-04**	**39.323**

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	4.60E-03	0	1.00E-05	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0	0	0	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.7966	0.7966	1.3000e-004	2.0000e-005	0.8045
Mobile	0	0	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
Stationary	0.082	0.3669	0.2092	3.9000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	38.0797	38.0797	5.3400e-003	0.0000	38.2132
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0818	0.1158	0.1976	2.1600e-003	1.8000e-004	0.3052
Total	**0.0866**	**0.3669**	**0.2092**	**3.90E-04**	**0**	**0.0121**	**0.0121**	**0**	**0.0121**	**0.0121**	**0.0818**	**38.9921**	**39.074**	**7.63E-03**	**2.00E-04**	**39.323**

	ROG	NOx	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**

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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

4.4 Fleet Mix

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.7966	0.7966	1.3000e-004	2.0000e-005	0.8045
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.7966	0.7966	1.3000e-004	2.0000e-005	0.8045
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

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
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
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	8610	0.7966	1.3000e-004	2.0000e-005	0.8045

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		**0.7966**	**1.3000e-004**	**2.0000e-005**	**0.8045**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8610	0.7966	1.3000e-004	2.0000e-005	0.8045
Total		**0.7966**	**1.3000e-004**	**2.0000e-005**	**0.8045**

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	4.6000e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	4.6000e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	7.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.6100e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	7.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.6100e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.1976	2.1600e-003	1.8000e-004	0.3052
Unmitigated	0.1976	2.1600e-003	1.8000e-004	0.3052

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.1976	2.1600e-003	1.8000e-004	0.3052

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.1976**	**2.1600e-003**	**1.8000e-004**	**0.3052**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.1976	2.1600e-003	1.8000e-004	0.3052
Total		**0.1976**	**2.1600e-003**	**1.8000e-004**	**0.3052**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Jasmine Solar Energy Model - San Joaquin Valley Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Emergency Generator	1	0	100	1000	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0820	0.3669	0.2092	3.9000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	38.0797	38.0797	5.3400e-003	0.0000	38.2132
Total	**0.0820**	**0.3669**	**0.2092**	**3.9000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**38.0797**	**38.0797**	**5.3400e-003**	**0.0000**	**38.2132**

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Appendix H

Geotechnical Engineering Investigation Report

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT
JASMINE SOLAR PROJECT
KERN COUNTY, CALIFORNIA

BSK PROJECT G20-268-10F

PREPARED FOR:

IDEMITSU RENEWABLES
50 CALIFORNIA STREET, SUITE 820
SAN FRANCISCO, CA 94111

February 8, 2021

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT
JASMINE SOLAR PROJECT
KERN COUNTY, CALIFORNIA

Prepared for:

Mr. Diego Osnaya
Idemitsu Renewables
50 California Street, Suite 280
San Francisco, CA 94111

Fresno Project: G20-268-10F

February 8, 2021

Prepared by:

Corinne Goodwin, PE
Project Engineer

On Man Lau, PE, GE
South Valley Regional Manager

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
(559) 497-2880
(559) 497-2886 FAX



Distribution: Email: diego.osnaya.0220@idemitsurenewables.com

Table of Contents

1. Introduction 1
1.1. Planned Construction 1
1.2. Purpose and Scope of Services 1
2. Field Investigation and Laboratory Testing 1
2.1. Field Exploration 1
2.1.1 Drilling 1
2.1.2 Load Testing 2
2.2 Laboratory Testing 2
2.2.1 Thermal Resistivity 2
2.3 Percolation Testing 3
2.4 Field Resistivity Testing 3
3. Site and Geology/Seismicity Conditions 3
3.1 Site Description and Surface Conditions 3
3.2 Regional Geology and Seismic Hazards Assessment 3
3.2.1 Regional Geology 3
3.2.2 Seismic Hazards Assessment 4
3.3 Subsurface Conditions 4
3.4 Groundwater Conditions 4
4. Conclusions and Recommendations 5
4.1 Seismic Design Criteria 5
4.2 Soil Corrosivity 6
4.3 Site Preparation Recommendations 6
4.4 Foundations 8
4.4.1 Mat Foundations 8
4.4.2 Pole Type Foundations 8
4.5 Lateral Earth Pressures and Frictional Resistance 9
4.6 Access Road Recommendations 10
4.7 Excavation Stability 10
4.8 Trench Backfill and Compaction 10
4.9 Drainage Considerations 11
5. Plans and Specifications Review 11

6. Construction Testing and Observations 11
7. Limitations 11
8. References 12

Tables

Table 1: Summary of Percolation Test Results
Table 2: Seismic Design Parameters
Table 3: LPILE Input Parameters
Table 4: Recommended Static Lateral Earth Pressures for Footings

Figures

Figure A-1: Site Vicinity Map
Figure A-2: Boring and Test Location Map

Appendices

Appendix A: Field Exploration

Table A-1: Consistency of Coarse-Grained Soil by Sampler Blow Count
Table A-2: Apparent Relative Density of Fine-Grained Soil by Sampler Blow Count
Figure A-1: Soil Classification Chart and Log Key
Boring Logs: Borings B-1 through B-29
Figures A-2 through B-4: Field Resistivity Test Results
Figures A-5 through B-8: Percolation Test Results

Appendix B: Laboratory Test Results

Table B-1: Summary of Corrosion Test Results
Figures B-1 through B-6: Direct Shear Test Results
Figure B-7: Moisture-Density Relationship Test Results
Figure B-8 through B-13: Collapse Potential Test Results
Figure B-14: CBR Test Results

Appendix C: Pile Load Test Results

Appendix D: Thermal Resistivity Test Results

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 in the Mettler area of Kern County, California (Site). The Site is located at the northwest corner of Copus Road and Old River Road in Kern County, California as shown on the Site Vicinity Map, Figure A-1. The geotechnical engineering investigation was conducted in accordance with BSK Proposal GB20-20912B, dated November 6, 2020.

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 site is located in the alfalfa field and vacant field on the northwest corner of Copus Road and Old River Road in the Mettler area of Kern County, California. The proposed improvements at the site consist of ground mounted solar panels supported on pole-type foundations, such as driven steel H-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 the geotechnical investigation is to assess soil conditions and to provide an assessment of the bearing conditions at the site. In general, the geotechnical investigation will consist of a field exploration, laboratory testing, engineering analysis, and preparation of a separate report summarizing our findings and recommendations.

2. FIELD INVESTIGATION AND LABORATORY TESTING

2.1. Field Exploration

2.1.1 Drilling

The field exploration for this investigation was conducted under the oversight of a BSK engineer. Twenty-nine (29) borings were drilled at the Site on December 7 through 9, 2020 using a CME 75 drill rig equipped with hollow stem augers and an auto-hammer provided by Baja Exploration of Escondido, California. The borings were drilled to a maximum depth of 10.5 to 51.5 feet beneath the existing ground surface (bgs) and backfilled with the soil cuttings and surrounding soil.

The soil materials encountered in the Boring were visually classified in the field, and the log was recorded during the drilling and sampling operations. Visual classification of the materials encountered in the boring was made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented in Appendix A.

The boring log is 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.

2.1.2 Load Testing

On November 20, 2020, Renewable Solar conducted the pile driving for twenty (20) W6x9 piles measuring a maximum of approximately 10 feet in length. There were ten (10) locations and two (2) piles were driven at each location. These piles were driven into the ground approximately 6 feet into the ground for testing. The piles were spaced at least 10 feet apart at each location. An axial (uplift/tension) test was performed on one pile and a lateral (strong axis) test was performed on the other pile in each test location. Pile load testing locations are shown in Figure 2.

On November 23 and 24, 2020, BSK Associates performed pile load testing, and assisted by Renewable Solar. All testing was conducted using an 8,000-lb capacity Sunbelt forklift, tow straps, digital distance micrometer (accuracy within 0.01-in), 10,000-lb capacity dynamometer, bubble level, and extra shackles/d-rings. The acceptance criterion for the at-grade horizontal deflection of each pile is ¾-inch for lateral and 1-inch for axial.

One pile was tested in uplift (axial tension). A clamp was placed on the top of the pile which was then connected with the load cell, a ratcheting chain, and a tow strap that then connected to the forklift boom. The digital distance meter was placed on a leveled surface and attached to the pile to read the displacement in the axial direction. Loads were applied in load increments in pounds (lbs). The pile was subjected to tension up to 5,000-lb and then to a maximum load up to 1-inch deflection.

The piles were removed by Golden Excavation on December 8, 2020 using an excavator.

2.2 Laboratory Testing

Laboratory tests were performed on selected soil samples to evaluate moisture content, dry density, shear strength, expansion index, California Bearing Ratio (CBR), and corrosion characteristics. A description of the laboratory test methods and results are presented in Appendix B.

2.2.1 Thermal Resistivity

Six (6) relatively undisturbed soil samples were evaluated for thermal resistivity of soil using accepted test methods. The thermal resistivity testing was performed by DBS&A of Albuquerque, New Mexico. This laboratory testing is presented in Appendix D.

2.3 Percolation Testing

The percolation testing was conducted by a BSK staff member on December 9 and 10, 2020. Four (4) percolation tests were performed at the locations shown on Figure 2. Because percolation tests incorporate both downward and horizontal fluxes of water, where infiltration accounts only for downward flux, the percolation test rates were converted to estimate infiltration rates using the Porchet Method (a.k.a. Inverse Borehole Method). The percolation test results and determined infiltration rates are presented Table 1 and Appendix A.

Table 1: Summary of Percolation Test Results		
Test Location	Soil Description	Percolation Rate (minute/inch)
P-1	Clayey Sand	0.91
P-2	Clayey Sand	3.86
P-3	Sandy Silt	3.15
P-4	Sandy Clay	630

2.4 Field Resistivity Testing

Ten (10) field resistivity tests were conducted at the Site on December 30 and 31, 2020 using the Wenner 4-pin method in the array and substation areas as shown in Figure 2. A summary of the field electrical resistivity tests results are provided in Appendix A.

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 bounded by Old River Road to the east, Copus Road to the south and vacant agriculture land to the north and west. The Site is located in Section 31, Township 32 South, and Range 27 East of the Mount Diablo Meridian. The NAD 83 GPS coordinates for the center of the Site are 35.1017 degrees North latitude and 119.1187 degrees West longitude.

The surface conditions at the time of the field exploration was an actively watered alfalfa field on the south side of the site and a vacant field on the north side of the site.

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 Great Valley geomorphic province. 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 Fault-Rupture Hazard Zone. The closest fault zone is associated with the 1952 earthquake fractures on the east side of the Site and the Wheeler Ridge fault zone 6.5 miles south 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 and liquefaction potential is low.

3.3 Subsurface Conditions

The subsurface material generally consists of mostly silty and clayey sands and sandy silt or sandy clay underlain by alternating layers of sands and clays to the maximum depths of exploration (11.5 to 51.5 feet bgs).

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 encountered in boring B-27 at 27 feet on December 7, 2020. 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 greater than 100 feet bgs.

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.

4.1 Seismic Design Criteria

Based on Section 1613.3.2 of the 2019 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 7-16.

The 2019 CBC utilizes ground motion based on the Risk-Targeted Maximum Considered Earthquake (MCER) that is defined in the 2019 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 2019 CBC are based on ASCE 7-16, Chapter 11.

The Structural Engineers Associates of California (SEAOC) has prepared maps presenting the Risk-Targeted MCE spectral acceleration (5 percent damping) for periods of 0.2 seconds (S_S) and 1.0 seconds (S_1). The values of S_S and S_1 can be obtained from the Occupational Safety Health Planning and Development (OSHPD) Seismic Design Maps Tool at: https://seismicmaps.org/.

The OSHPD Seismic Design Maps Tool and Chapter 16 of the 2019 CBC based on ASCE 7-16 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 2019 CBC, peak ground acceleration (PGA) utilized for dynamic lateral earth pressures and liquefaction, shall be based on a site-specific study (ASCE 7-16, Section 21.5) or ASCE 7-16, Section 11.8.3. The OSHPD Seismic Design Maps Tool and based on ASCE 7-16, Section 11.8.3 produced the Geometric Mean PGA value in Table 2 based on Site Class D conditions.

Table 2: Seismic Design Parameters			
Seismic Design Parameter	2019 CBC Value		Reference
MCE Mapped Spectral Acceleration (g)	S_S = 1.335	S_1 = 0.499	USGS Mapped Value
Amplification Factors (Site Class D)	F_a = 1.000	F_v = null[1](1.801)[2]	ASCE Table 11.4
Site Adjusted MCE Spectral Acceleration (g)	S_{MS} = 1.335	S_{M1} = null[1](0.899)[2]	ASCE Equations 11.4.1-2
Design Spectral Acceleration (g)	S_{DS} = 0.890	S_{D1} = null[1] (0.599)[2]	ASCE Equations 11.4.1-4
Geometric Mean PGA (g)	PGA_M = 0.550		Section 11.8.3, ASCE 7-16
Site Short Period – T_S (seconds)	T_S = 0.673		$T_S = S_{D1}/ S_{DS}$
Site Long Period – T_L (seconds)	T_L = 12		USGS Mapped Value

Notes: [1] Requires site-specific ground motion procedure or exception as per ASCE 7-16 Section 11.48
[2] Values from ASCE 7-16 supplement, shall only be used to calculate T_S

4.2 Soil Corrosivity

Surface soil samples were obtained from the Site to provide a preliminary screening of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts. Twenty (20) soil samples were collected for corrosion testing to evaluate minimum resistivity, pH, soluble sulfates, soluble chlorides, and redox potential was performed by Sunland Analytical Laboratories of Rancho Cordova, CA. The corrosion tests were performed using ASTM G51, G187, G200, C1580, and D5212. This laboratory testing is summarized in Table B-1 in Appendix B.

The water-soluble sulfate content severity class is considered moderately severe to very severe to concrete (Exposure Category S1 to S3 per Table 4.2.1 of ACI 318-11). Therefore, Type "V" cement and a maximum water/cement ratio of 0.45 are recommended for concrete in contact with the near-surface soils.

The site soils minimum resistivity is considered severely to very severely corrosive to buried metal. Therefore, buried metal conduits, ferrous metal pipes, and exposed steel should have a protective coating in accordance with the manufacturer's specification. The above are general discussions. A more detailed investigation may include more or fewer concerns and should be directed by a corrosion expert. BSK does not practice corrosion engineering.

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 must be removed where encountered and where fills or structural improvements will be placed. BSK recommends one foot of non-expansive (EI < 20) engineered fill below shallow foundations. Over excavation should extend laterally five feet beyond the edge of foundations. Yielding areas should be observed by the geotechnical consultant and removed and recompacted if necessary.

2. Following the required stripping and over excavation, the exposed ground surface must be inspected by the Geotechnical Engineer to evaluate if loose or soft zones are present that will require additional over excavation.

3. Imported soil (EI < 20), 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 at or above optimum moisture content and compacted to at least 90 percent of maximum dry density.

4. 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.

5. 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 mat foundations and driven piles. A structural engineer must evaluate reinforcement, embedment depth based on the requirements for the structural loadings, shrinkage and temperature stresses.

4.4.1 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. The concrete mat foundation must be at least 8 inches thick and satisfy structural considerations.

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 less than 1-inch, and maximum differential settlements are expected to be about 0.5-inch.

4.4.2 Pole Type Foundations

It is anticipated that the structures will be supported on driven piles. The values included in this section are based on our laboratory test results. This type of foundation should be designed in accordance with Section 1807.3.2 of the 2019 CBC. However, it is recommended that an allowable lateral soil bearing pressure of 180 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. If the pier foundation is in the asphalt concrete pavement, the upper one foot can be used for design.

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 6,000 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 300 psf may be used, which includes a factor of safety of 1.5, per the 2019 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 300 psf may be used, which includes a factor of safety of 1.5, to resist transient uplift loads, per the 2019 CBC. Skin friction may be increased by 1/3 to 533 psf for short term loading. The 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, 150 pci, for the structural designers to use in their LPILE analysis. We recommend using the Reese et al., 1975 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 3: LPILE Input Parameters	
Soil Type	Silty and Clayey Sands
p-y curve model	Reese et al., 1975
Effective Unit Weight, pcf	120
Subgrade Reaction, pci	150
Effective Friction Angle, degrees	30

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 4: Recommended Static Lateral Earth Pressures for Footings	
Lateral Pressure Condition	Ultimate Equivalent Fluid Density (pcf) Drained Condition
Active Pressure	40
At Rest Pressure	60
Passive Pressure	360

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 0.27 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 2019 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 Access Road Recommendations

BSK recommends the proposed on-site all-weather fire access roadway be constructed with a minimum 8-inches of compacted aggregate base (minimum 92 percent per ASTM D1557) over a minimum 12-inches of compacted native soil (minimum 92 percent per ASTM D1557). It is our professional opinion that the proposed on-site all-weather fire access roadway, if constructed per the recommendations above, will be adequate to support the weight of a 75,000-lb fire engine apparatus.

4.7 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).

4.8 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.

4.9 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 buildings and similar 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.

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 Boring performed at the location shown on the Boring and Test Location Map, Figure 2. The report does not reflect variations which may occur between or beyond the Boring. 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.

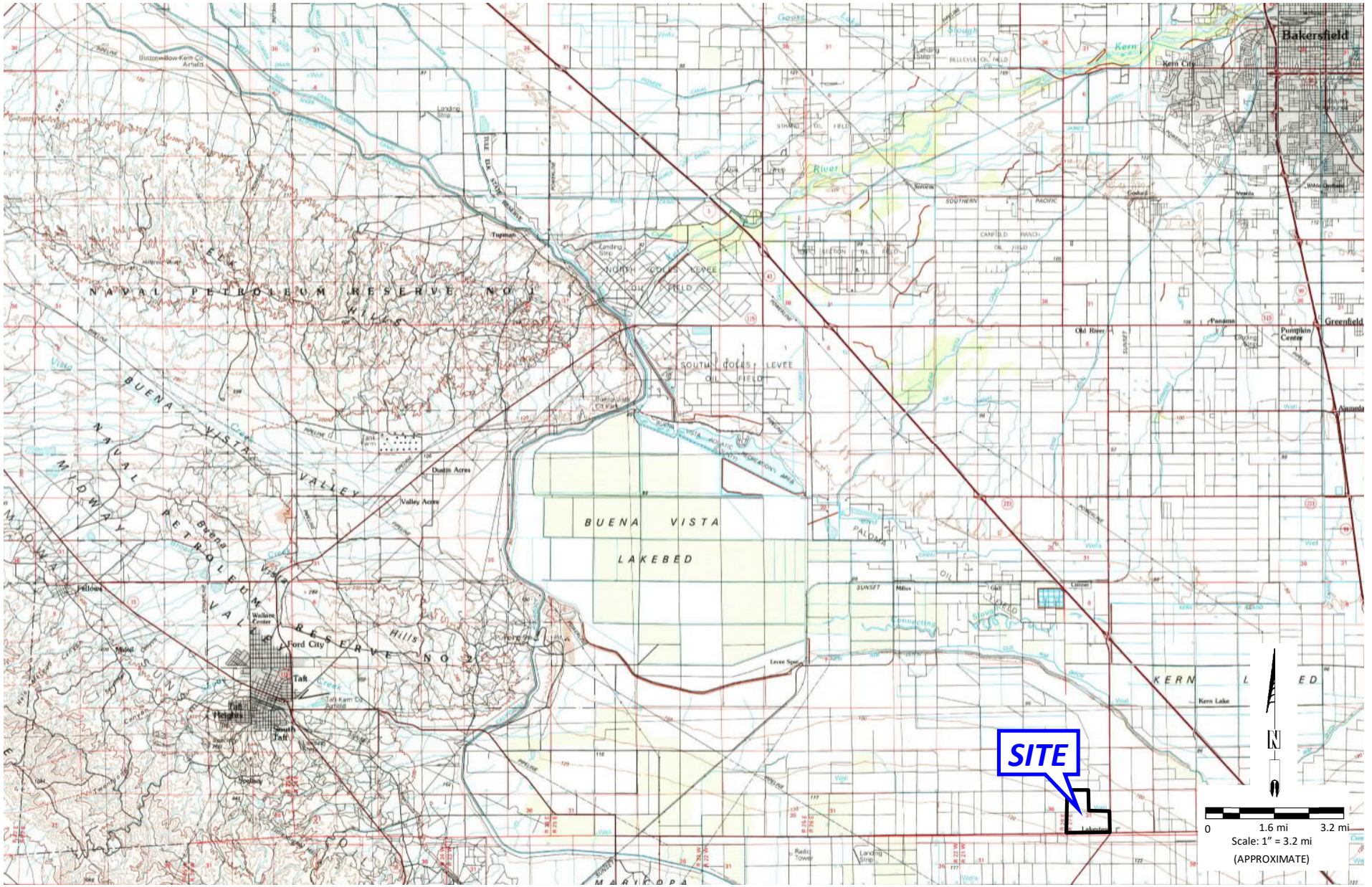
8. REFERENCES

Department of Water Resources. http://www.water.ca.gov/waterdatalibrary/, Water Data Library, 2020.

Earth Point. http://earthpoint.us/townships.aspx, Public Land Survey System, Google Earth, 2020.

"U.S. Seismic Design Maps." U.S. Seismic Design Maps, 2020, seismicmaps.org/.

FIGURES



REFERENCE IMAGE: USGS Topographic Map

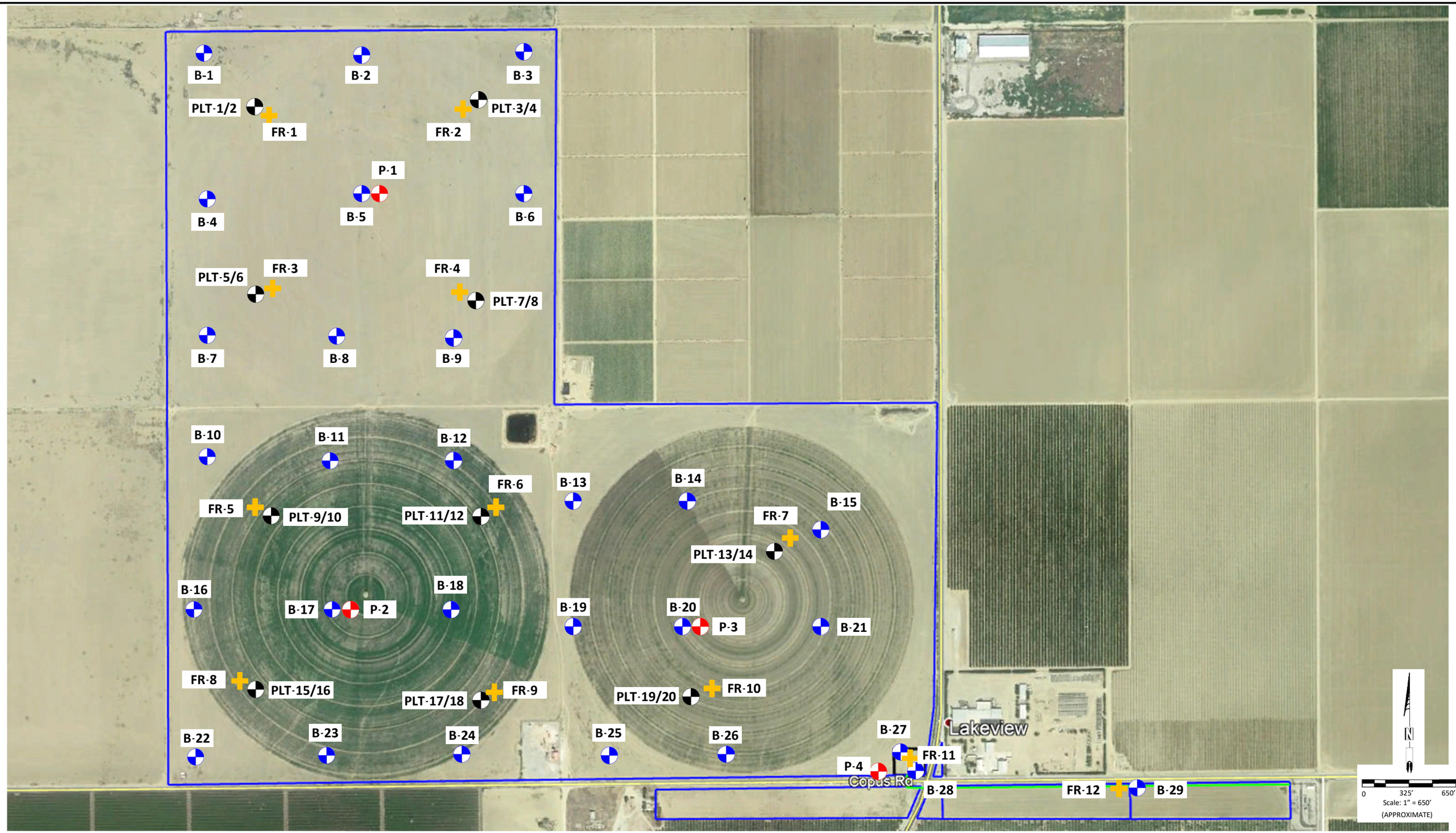
ESK ASSOCIATES
550 W Locust Avenue
Fresno, CA 93650
Tel. (559) 497-2880

SITE VICINITY MAP

Jasmine Solar
Copus Road & Old River Road
Mettler, California

FIGURE 1

JOB NO. G20-268-10F
DATE December 2020
DR. BY CG
CH. BY OML
SCALE AS SHOWN
SHEET NO. 1 OF 2 SHEETS



LEGEND:

- APPROXIMATE BORING LOCATIONS
- APPROXIMATE PERCOLATION TEST LOCATIONS
- APPROXIMATE PILE LOAD TEST LOCATIONS
- APPROXIMATE FIELD RESISTIVITY TEST LOCATIONS

REFERENCE IMAGE: Google Earth 2020

BSK ASSOCIATES
550 W Locust Ave
Fresno, CA 93650
Tel. (559) 497-2880

BORING AND TEST LOCATION MAP

Jasmine Solar
Copus Road & Old River Road
Mettler, California

FIGURE 2

JOB NO. G20-268-10F
DATE December 2020
DR. BY CG
CH. BY OML
SCALE AS SHOWN
SHEET NO. 2 OF 2 SHEETS

APPENDIX A

FIELD EXPLORATION

APPENDIX A
FIELD EXPLORATION

The field exploration for this investigation was conducted under the oversight of a BSK engineer. Twenty-nine (29) borings were drilled at the Site on December 7 through 9, 2020 using a CME 75 drill rig equipped with hollow stem augers and an auto-hammer provided by Baja Exploration of Escondido, California. The borings were drilled to a maximum depth of 10.5 to 51.5 feet beneath the existing ground surface (bgs) and backfilled with the soil cuttings and surrounding soil.

The soil materials encountered in the test boring was visually classified in the field, and the log was recorded during the drilling and sampling operations. Visual classification of the materials encountered in the test boring was made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented herein. Boring log is 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: Apparent Relative Density 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
Stiff	4 – 8	6 – 12
Very Stiff	8 – 15	12 – 24
Hard	15 – 30	24 – 45
Very Hard	>30	>45

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		Water Level measured at time of Drilling (with date noted)
	Standard Penetration Test (2-inch outside diameter)		Water Level measured after Drilling (with date noted)
	Modified California (3-inch outside diameter)		Hand Auger Cuttings
	Split Barrel Sampler (2 ½-inch outside diameter)		Grab Sample
	Undisturbed Sample		Sample Attempt with No Recovery
	Continuous Core Sample		

SOIL CLASSIFICATION CHART AND LOG KEY
Unified Soil Classification System (ASTM D 2487)
Figure A-1

BSK ASSOCIATES

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 1**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								CL	**Lean CLAY** - brown, moist, fine grained sand	
2			18							
3			20	110.8	11.6			SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
4										
5			11							
6										
7										
8										
9										
10										
11			12	88.9	31.0			CL	**Sandy CLAY** - brown, moist, fine grained sand	
12										
13										
14										
15										
16			2							
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 2**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–5								CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
3			21	113.0	13.9					
6			12					SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
11			13	97.1	19.8			CL	**Clay with SAND** - brown, moist, fine to medium grained sand	
									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 3**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand, moderately cemented	
2			11							
3			25	105.9	11.3				... increased fines content, trace clay	Figure B-1: Direct Shear: phi = 31°, c = 0 psf
4										
5			13					SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
6										
7										
8										
9										
10										▽
11			6	92.5	25.7			CL	**Lean CLAY** - brown, moist to wet, fine grained	
12										
13										
14										
15										
16										
17									Boring terminated at approximately 16.5 feet bgs. Groundwater encountered at 10 feet bgs. Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: 10 Feet
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 4**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
2										
3			10							
4										
5										
6			10	104.4	13.3				... weakly cemented	
7										
8										
9										
10										
11			10					CL	**Sandy CLAY** - brown, moist, fine grained sand	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 5**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1	■							ML	**Sandy SILT** - brown, moist, fine to medium grained sand, moderatley cemented	
2	■		17							
3	■		14	96.1	28.3			SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
4	■									
5	■		6	104.3	14.2			CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
6										
7										
8										
9										
10	■									
11	■		11	108.8	5.9				... fine to coarse grained sand	
12										
13										
14										
15										
16									... moist-wet	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 6**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained sand	
2										
3			6							
4										
5										
6			11	99.6	19.8			SC	**Clayey SAND** - brown, moist, fine to medium grained sand	
7										
8										
9										
10										
11			3						... moist-wet Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 7**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
2			20							
3			12	105.9	6.5				... increased sand	
4										
5			11	107.0	13.9			CL	**Lean CLAY with Sand** - brown, moist, fine to medium grained sand	
6										
7										
8										
9										
10										
11			11	97.6	20.0			ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
12										
13										
14										
15								CL	**Sandy CLAY** - brown, moist, fine to coarse grained sand	
16			4							
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 8**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
2										
3	■		7	120.0	21.6					
4										
5	■									
6			9						... medium plastic	
7										
8										
9										
10	■									
11			11							
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B- 9**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
2			39							
3			12	128.1	15.1			SM	**Silty SAND** - brown, moist, fine to coarse grained sand, trace gravel	Figure B-2: Direct Shear: phi = 36°, c = 0 psf
4										
5			7						... trace clay	
6										
7										
8										
9										
10										
11			6	113.3	30.2				... moist to wet	
12										
13										
14										
15										
16			4							
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS_JASMINE.GPJ BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-10**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
2										
3	■		31	139.1	6.7					
4										
5	■									
6			33						... trace gravel	
7										
8										
9										
10	■									
11			9					CL	**Lean CLAY with Sand** - brown, moist, fine grained sand	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-11**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained sand	
2			22							
3			18	113.2	10.9			ML	**Sandy SILT** - brown, moist, fine to medium grained sand, trace clay	
4										
5			14						... moderately cemented	
6										
7										
8										
9										
10										
11			11	123.9	6.2					
12										
13										
14										
15										
16			6					SM	**Silty SAND** - brown, moist, fine to medium grained sand, trace clay	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-12**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–5								SM	**Silty SAND** - pale brown, moist, fine to medium grained sand, subrounded/angular gravel	
3			32							
6			41		1.5				... increased gravel, fine to coarse grained gravel	
10								SP	**Poorly Graded SAND with Gravel** - brown, moist, fine to coarse grained sand/gravel	
11			23	126.4	3.4					
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-13**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand, moderately cemented	
2			28							
3			11	116.2	15.0			CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
4										
5			10	124.0	18.1				... less sand	
6										
7										
8										
9										
10										
11			27	123.7	8.4			SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
12										
13										
14										
15										
16			6						... wet to moist	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-14**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
2										
3	■		24	133.7	10.4					Figure B-3: Direct Shear: phi = 31°, c = 250 psf
4										
5	■		24	92.5	24.0					
6										
7										
8										
9										
10	■									
11			8					CL	**Sandy CLAY** - brown, moist, fine grained sand	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-15**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to coarse grained sand	
2			10							
3			19	104.9	11.0				... moderately cemented, increase fines content	
4										
5			15					SM	**Silty SAND** - brown, moist, fine to medium grained sand, trace clay	
6										
7										
8										
9										
10										
11			22	102.8	15.0					
12										
13										
14										
15										
16			4					CL	**Lean CLAY** - brown, moist to wet, fine grained sand	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-16**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - pale brown, moist, fine to medium grained sand	
2										
3	■		15	99.6	5.8					
4										
5	■									
6			18						... weakly cemented	
7										
8										
9										
10	■									
11			21						... fine grained sand	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-17**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine grained sand	
2			15							
3			10	106.6	15.4			CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	Figure B-4: Direct Shear: phi = 31°, c = 0 psf
4										
5			12	104.2	17.8				... increased sand	
6										
7										
8										
9										
10										
11			20	85.5	27.9			CL	**Lean CLAY with Sand** - brwon, moist, fine to medium grained sand	
12										
13										
14										
15										
16			10					SP-SM	**Poorly Graded SAND with Silt** - brown, moist, fine to coarse grained sand	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-18**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand, trace clay	
2										
3			20							
4										
5										
6			11	94.4	6.5				... moderately cemented, increased sand content	
7										
8										
9										
10										
11			12					CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-19**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - light brown, moist, fine to medium grained	
2			38							
3			30	95.3	5.8				... moderately cemented	
4										
5			20					ML	**SILT** - brown, moist, fine grained sand, trace clay	
6										
7										
8										
9										
10										
11			80	107.3	11.0			SM	**Silty SAND** - brown, moist, fine to medium grained sand	
12										
13										
14										
15										
16			4						... trace clay, moist-wet	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-20**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand, trace clay	
2										
3	■		14	103.4	13.6					
4										
5	■									
6			14						... less clay, weak cement	
7										
8										
9										
10	■									
11			32							
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-21**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
2			21							
3			50						... disturbed sample	
4			56	104.3	12.2				... trace clay, increased fines content	
5			7	93.5	19.9					
6										
7										
8										
9										
10										
11			50					SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
12										
13										
14										
15										
16			5					CL	**Lean CLAY** - brown, moist to wet, fine grained sand	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/8/20
Date Completed: 12/8/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-22**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								ML	**Sandy SILT** - olive, dry to moist, fine grained sand, trace clay	
2										
3			48						... moderately cemented	
4										
5								SM	**Silty SAND** - olive, dry to moist, fine to coarse grained sand, weakly cemented	
6			38		4.9				... medium dense	
7										
8										
9										
10										
11			16	136.6	9.3					
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-23**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - olive, dry to moist, fine to medium grained sand, white striations, trace clay, trace rootlets < 1/8"	
2			41							
3			58						... dense, strongly cemented	
4										
5			26	134.0	5.2					
6			17	118.4	3.2				... weakly cemented, medium dense	
7										
8										
9										
10										
11			21							
12										
13										
14										
15										
16			9						... loose, increased fines content	
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-24**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–24				131.0	8.3			SC	**Clayey SAND** - olive, moist, fine grained sand ... medium dense ... weakly cemented Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-25**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, dry to moist	
2			35							
3			42						... dense	
4										
5			20	130.9	4.8				... medium dense	
6			15	124.0	5.3					Figure B-5: Direct Shear: phi = 30°, c = 0 psf
7										
8										
9										
10								CL	**Sandy Lean CLAY** olive, dry to moist, fine grained sand	
11			28					SM	**Silty SAND** - olive, dry to moist, fine to coarse grained sand, medium dense	
12										
13										
14										
15								SP-SM	**Poorly Graded SAND with Silt** - olive, dry to moist, medium dense, fine to coarse grained sand	
16			14							
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

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550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-26**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained sand	
2										
3			13						... medium dense, fine to coarse grained sand, trace medium grained gravel, subangular/subrounded	
4										
5								SP-SM	**Poorly Graded SAND with Silt** - grayish brown, dry to moist, medium dense, fine to coarse grained sand	
6			29							
7										
8										
9										
10										
11			24						... increase fines, trace fine grained gravel, subangular/subrounded	
12									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-27**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4								CL	**Sandy Lean CLAY** - yellowish brown, moist, fine grained sand	
3			15	120.8	24.7				... stiff, white striations	
5–7			10	128.3	14.2			SM	**Silty SAND** - brown, moist, loose, fine to medium grained sand	
8–14			9	103.5	32.5			SM	**CLAY** - olive, moist ... stiff	
15–19			5					CL	**Sandy Lean CLAY** - olive, moist, fine to medium grained sand	
20–23			11	127.0	19.0			SC	**Clayey SAND** - olive, moist to wet, fine to coarse grained sand	
24								SP	**Poorly Graded SAND** - grayish brown, moist to wet, fine to coarse grained sand	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: 27 Feet
Completion Depth: 51.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

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550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-27**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
26			31						**Poorly Graded SAND** - grayish brown, moist to wet, fine to coarse grained sand *(continued)*	
27									... medium dense, trace fine grained gravel, subangular/subrounded	▽
28										
29										
30										
31			50/ 5.5"		7.3				... dense, trace silt	
32										
33										
34										
35								SP-SM	**Poorly Graded SAND with Silt** - grayish brown, wet to moist, medium dense, fine to coarse grained sand, trace fine grained gravel, subangular/subrounded	
36			35							
37										
38										
39										
40									... dense, increased fines content	
41			58	104.0	22.6					
42								CL	**Sandy Lean CLAY** - olive, moist, fine to coarse grained sand	
43										
44										
45										
46			4						... soft to wet, stiff, fine to medium grained sand	
47										
48										
49								SM		

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: 27 Feet
Completion Depth: 51.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-27**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
51			22	109.6	17.7				**Silty SAND** - grayish brown, medium dense, fine to medium grained sand *(continued)*	
									Boring terminated at approximately 51.5feet bgs. Groundwater encountered at 27 feet bgs. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: 27 Feet
Completion Depth: 51.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: S. Jue

Checked By: O. Lau

Boring: **B-28**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained sand	
2			17						... medium dense, fine to coarse grained sand	
3			36	121.1	10.6				... white striations, trace clay	Figure B-6: Direct Shear: phi = 30°, c = 250 psf
4										
5			26							
6			14						... loose	
7										
8										
9										
10								CL	**CLAY** - olive, moist, medium stiff, trace fine grained sand	
11			9	96.2	20.2					
12										
13										
14										
15								SM	**Silty SAND** - brown, moist, loose, fine grained sand	
16			6							
17										
18										
19										
20								SC	**Clayey SAND** - brown, wet, very loose, fine grained sand	
21			3							
22									Boring terminated at approximately 21.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/7/20
Date Completed: 12/7/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 21.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

BSK Associates
550 W Locust Ave.
Fresno, CA 93650
Telephone: 559.497.2880
Fax: 559.497.2886

Project: Jasmine Solar

Location: Old River Rd & Copus Rd, Kern County, CA

Project No.: G20-268-10F

Logged By: J. Leu

Checked By: O. Lau

Boring: **B-29**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained sand, trace angular gravel	
2			29							
3			16	106.1	2.4				... trace subangular gravel	
4								ML	**Sandy SILT** - brown, moist, fine to medium grained sand	
5			9					CL	**Sandy CLAY** - brown, moist, fine to medium grained sand	
6			5	84.3	32.3					
7										
8										
9										
10										
11			7						... wet-moist	
12										
13										
14										
15										
16			5							
17										
18										
19										
20									... moderately cemented	
21			7							
22									Boring terminated at approximately 21.5 feet bgs. No groundwater encountered Boring backfilled with soil cuttings.	
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 12/9/20
Date Completed: 12/9/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 21.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS_JASMINE.GPJ_BSK.GDT 1/8/21

ESK ASSOCIATES

550 W Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2880
Fax: (559) 497-2886

Field Resistivty Testing

ASTM G57 (Wenner 4-pin Method)

Project Name: Jasmine Solar **Project Number:** G20 - 268 - 10F **Test Conducted by:** S.J./J.L. & A.B.

Test Dates: December 30 and 31, 2020 & January 25, 2021 **Equipment Used:** MC Miller 400D

Field Resistance (Ω), measured at each pin spacing											
Location	Test Line	Orientation	Pin Spacing (feet)									
			2	4	5	8	10	25	50	75	100	200
F-1*	1	North-South	33.60	54.10	51.00	60.20	56.50	2.42	28.30	12.80	1.75	21.90
	2	East-West	59.30	39.60	49.60	45.60	9.97	0.88	1.49	0.23	4.34	1.84
F-2*	1	North-South	2.76	2.81	1.88	1.57	407.00	127.00	187.00	315.00	40.30	156.00
	2	East-West	751.00	2.20	996.00	156.00	99.20	85.30	0.88	22.90	28.00	5.07
F-3*	1	North-South	1.10	759.00	357.00	317.00	232.00	2.65	262.00	278.00	302.00	766.00
	2	East-West	757.00	1.13	587.00	1.84	2.03	2.16	626.00	1620.00	362.00	289.00
F-4	1	North-South	5.27	10.80	10.80	10.80	3.97	0.28	4.39	4.72	1.02	0.15
	2	East-West	19.40	49.00	53.10	135.00	76.80	2.29	3.93	0.29	2.86	15.10
F-5	1	North-South	13.60	5.75	3.48	2.44	1.77	0.61	0.27	0.17	0.17	0.20
	2	East-West	13.40	5.56	3.44	2.38	1.80	0.68	0.22	0.16	0.49	0.18
F-6	1	North-South	9.05	3.27	1.16	0.96	0.50	0.27	0.16	0.13	0.13	0.38
	2	East-West	7.68	3.12	1.30	0.69	0.56	0.24	0.13	0.10	0.16	0.37
F-7	1	North-South	4.50	1.72	0.99	0.70	0.49	0.09	0.07	0.07	0.07	0.11
	2	East-West	4.60	1.83	0.96	0.58	0.36	0.11	0.08	0.08	0.08	0.16
F-8	1	North-South	9.39	5.36	3.36	2.37	1.82	0.60	0.31	0.18	0.15	0.21
	2	East-West	10.00	5.17	3.16	2.42	2.14	0.55	0.29	0.16	0.15	3.41
F-9	1	North-South	12.80	4.65	2.00	1.14	0.86	0.34	0.15	0.15	0.22	0.91
	2	East-West	14.10	4.03	2.01	1.22	0.91	0.37	0.23	1.60	1.34	1.15
F-10	1	North-South	7.62	2.39	1.64	1.37	0.99	0.46	0.17	0.10	0.09	0.11
	2	East-West	8.15	2.44	1.50	1.19	1.01	0.36	0.14	0.09	0.09	0.10
F-11*	1	North-South	44.90	11.30	6.73	1.63	1.48	0.57	0.11	0.13	0.12	0.11
	2	East-West	81.70	24.20	7.85	4.85	2.03	0.20	0.11	0.10	0.12	0.12
F-12*	1	North-South	45.40	14.40	8.94	9.73	8.36	7.10	7.73	n/a	n/a	n/a
	2	East-West	40.30	17.00	12.70	12.30	17.30	4.42	7.47	n/a	n/a	n/a

*High numbers due to drier soils on top surface at time of testing

Figure A-2

550 W Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2880
Fax: (559) 497-2886

Field Resistivty Testing

ASTM G57 (Wenner 4-pin Method)

Project Name: Jasmine Solar **Project Number:** G20 - 268 - 10F **Test Conducted by:** S.J./J.L. & A.B.

Test Dates: December 30 and 31, 2020 & January 25, 2021 **Equipment Used:** MC Miller 400D

Field Resistivity (Ω-m)											
Location	**Test Line**	**Orientation**	**Pin Spacing (feet)**									
			2	**4**	**5**	**8**	**10**	**25**	**50**	**75**	**100**	**200**
F-1*	1	North-South	128.7	414.4	488.4	922.3	1,082.0	115.9	2,709.9	1,838.5	335.1	8,388.2
	2	East-West	227.1	303.4	474.9	698.6	190.9	42.1	142.7	33.0	831.2	704.8
F-2*	1	North-South	10.6	21.5	18.0	24.1	7,794.5	6,080.5	17,906.3	45,244.6	7,717.9	59,751.6
	2	East-West	2,876.5	16.9	9,537.3	2,390.1	1,899.8	4,084.0	84.3	3,289.2	5,362.3	1,941.9
F-3*	1	North-South	4.2	5,814.3	3,418.5	4,856.7	4,443.1	126.9	25,088.0	39,930.1	57,836.5	293,395.6
	2	East-West	2,899.5	8.7	5,620.9	28.2	38.9	103.4	59,943.1	232,686.5	69,327.2	110,693.6
F-4	1	North-South	20.2	82.7	103.4	165.5	76.0	13.4	420.4	678.0	195.3	57.5
	2	East-West	74.3	375.4	508.5	2,068.3	1,470.8	109.6	376.3	41.7	547.7	5,783.6
F-5	1	North-South	52.1	44.0	33.3	37.4	33.9	29.2	25.9	24.4	32.6	76.6
	2	East-West	51.3	42.6	32.9	36.5	34.5	32.6	21.1	23.0	93.8	68.9
F-6	1	North-South	34.7	25.0	11.1	14.7	9.6	12.9	15.3	18.7	24.9	145.5
	2	East-West	29.4	23.9	12.4	10.6	10.7	11.5	12.4	14.4	30.6	141.7
F-7	1	North-South	17.2	13.2	9.5	10.7	9.4	4.3	6.7	10.1	13.4	42.1
	2	East-West	17.6	14.0	9.2	8.9	6.9	5.3	7.7	11.5	15.3	61.3
F-8	1	North-South	36.0	41.1	32.2	36.3	34.9	28.7	29.7	25.9	28.7	80.4
	2	East-West	38.3	39.6	30.3	37.1	41.0	26.3	27.8	23.0	28.7	1,306.1
F-9	1	North-South	49.0	35.6	19.2	17.5	16.5	16.3	14.4	21.5	42.1	348.6
	2	East-West	54.0	30.9	19.2	18.7	17.4	17.7	22.0	229.8	256.6	440.5
F-10	1	North-South	29.2	18.3	15.7	21.0	19.0	22.0	16.3	14.4	17.2	42.1
	2	East-West	31.2	18.7	14.4	18.2	19.3	17.2	13.4	12.9	17.2	38.3
F-11*	1	North-South	172.0	86.6	64.4	25.0	28.3	27.3	10.5	18.7	23.0	42.1
	2	East-West	312.9	185.4	75.2	74.3	38.9	9.6	10.5	14.4	23.0	46.0
F-12*	1	North-South	173.9	110.3	85.6	149.1	160.1	339.9	740.2	n/a	n/a	n/a
	2	East-West	154.4	130.2	121.6	188.4	331.3	211.6	715.3	n/a	n/a	n/a

*High numbers due to drier soils on top surface at time of testing

Figure A-3

550 W Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2880
Fax: (559) 497-2886

Field Resistivty Testing

ASTM G57 (Wenner 4-pin Method)

Project Name: Jasmine Solar **Project Number:** G20 - 268 - 10F **Test Conducted by:** S.J./J.L. & A.B.

Test Dates: December 30 and 31, 2020 & January 25, 2021 **Equipment Used:** MC Miller 400D

Field Resistivity (Ω-cm)											
Location	Test Line	Orientation	Pin Spacing (feet)									
			2	4	5	8	10	25	50	75	100	200
F-1*	1	North-South	12,870	41,443	48,835	92,232	108,204	11,586	270,989	183,851	33,515	838,820
	2	East-West	22,713	30,335	47,495	69,863	19,094	4,213	14,268	3,304	83,116	70,476
F-2*	1	North-South	1,057	2,153	1,800	2,405	779,452	608,049	1,790,632	4,524,459	771,791	5,975,158
	2	East-West	287,650	1,685	953,727	239,006	189,979	408,398	8,427	328,921	536,232	194,193
F-3*	1	North-South	421	581,429	341,848	485,673	444,307	12,688	2,508,800	3,993,015	5,783,647	29,339,560
	2	East-West	289,948	866	562,086	2,819	3,888	10,342	5,994,310	23,268,646	6,932,716	11,069,364
F-4	1	North-South	2,019	8,273	10,342	16,547	7,603	1,341	42,037	67,795	19,534	5,745
	2	East-West	7,431	37,536	50,846	206,832	147,081	10,964	37,632	4,165	54,772	578,365
F-5	1	North-South	5,209	4,405	3,332	3,738	3,390	2,921	2,585	2,442	3,256	7,660
	2	East-West	5,133	4,259	3,294	3,646	3,447	3,256	2,107	2,298	9,384	6,894
F-6	1	North-South	3,466	2,505	1,111	1,471	958	1,293	1,532	1,867	2,490	14,555
	2	East-West	2,942	2,390	1,245	1,057	1,072	1,149	1,245	1,436	3,064	14,172
F-7	1	North-South	1,724	1,318	948	1,072	938	431	670	1,005	1,341	4,213
	2	East-West	1,762	1,402	919	889	689	527	766	1,149	1,532	6,128
F-8	1	North-South	3,596	4,106	3,217	3,631	3,486	2,873	2,968	2,585	2,873	8,043
	2	East-West	3,830	3,960	3,026	3,708	4,098	2,633	2,777	2,298	2,873	130,611
F-9	1	North-South	4,903	3,562	1,915	1,747	1,647	1,628	1,436	2,155	4,213	34,855
	2	East-West	5,401	3,087	1,925	1,869	1,743	1,771	2,202	22,981	25,663	44,048
F-10	1	North-South	2,919	1,831	1,570	2,099	1,896	2,202	1,628	1,436	1,724	4,213
	2	East-West	3,122	1,869	1,436	1,823	1,934	1,724	1,341	1,293	1,724	3,830
F-11*	1	North-South	17,198	8,656	6,444	2,497	2,834	2,729	1,053	1,867	2,298	4,213
	2	East-West	31,293	18,538	7,517	7,431	3,888	958	1,053	1,436	2,298	4,596
F-12*	1	North-South	17,389	11,031	8,561	14,907	16,010	33,993	74,019	n/a	n/a	n/a
	2	East-West	15,436	13,023	12,161	18,845	33,131	21,162	71,530	n/a	n/a	n/a

*High numbers due to drier soils on top surface at time of testing

Figure A-4

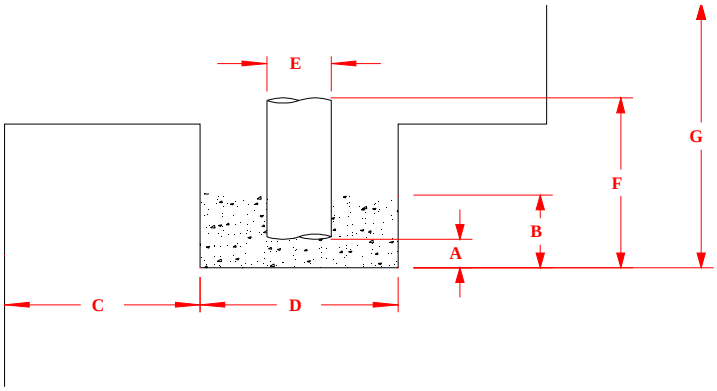
ASSOCIATES

PERCOLATION TEST DATA SHEET

FIGURE A-5

550 W. Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2868
Fax: (559) 497-2886

Project Name:	Jasmine Solar	Project No.:	G20-268-10F
Project Location:	Mettler, Kern County, CA	Pit No.:	P-1



A.	Gravel Layer Depth, in.	3
B.	Total Gravel Thickness, in.	20
C.	Distance from Shelf, ft.	N/A
D.	Hole Diameter, in.	8
E.	Case Diameter, in.	2.5
F.	Reference Depth, in.	79
G	Hole Depth, in.	60
	Depth to Groundwater	N/A
Soil Type:	Clayey Sand (SC)	

Date & Time Saturated: 12/9/20 11:28 AM

Depth of Water after 24-hour Saturation: No water remaining

Begin Test	Initial Depth to Water (ft)	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water (ft)	Final Depth to Water*, in.	Test Duration, min.	Water Drop, in.	**Drop Rate min./in.****
1:36:00	3.73	44.8	X	1:39:00	4.09	49.1	3.00	4.3	**1.68**
1:39:00	4.09	49.1		1:42:00	4.76	57.1	3.00	8.0	**0.90**
1:42:00	4.76	57.1		1:45:00	4.97	59.6	3.00	2.5	**2.88**
1:45:00	4.97	59.6		1:50:00	5.56	66.7	5.00	7.1	**1.71**
1:50:00	5.56	66.7		1:55:00	6.02	72.2	5.00	5.5	**2.19**
1:55:00	6.02	72.2		2:00:00	6.70	80.4	5.00	8.2	**1.48**
2:00:00	6.70	80.4		2:07:00	7.18	86.2	7.00	5.8	**2.92**
2:07:00	3.31	39.7	X	2:12:00	4.45	53.4	5.00	13.7	**0.88**
2:12:00	4.45	53.4		2:17:00	5.95	71.4	5.00	18.0	**0.67**
2:17:00	5.95	71.4		2:22:00	6.74	80.9	5.00	9.5	**1.28**
2:22:00	6.74	80.9		2:29:00	7.11	85.3	7.00	4.4	**3.81**
2:29:00	2.98	35.8	X	2:32:00	5.60	67.2	3.00	31.4	**0.23**
2:32:00	5.60	67.2		2:35:00	6.40	76.8	3.00	9.6	**0.76**
2:35:00	6.40	76.8		2:38:00	6.55	78.6	3.00	1.8	**2.12**
2:38:00	6.55	78.6		2:41:00	4.63	55.6	3.00	-	**-**
2:41:00	4.63	55.6		2:44:00	4.90	58.8	3.00	3.2	**0.00**
2:44:00	4.90	58.8		2:47:00	5.15	61.8	3.00	3.0	**0.00**
2:47:00	5.15	61.8		2:50:00	5.33	64.0	3.00	2.2	**3.36**
2:50:00	5.33	64.0		2:53:00	5.55	66.6	3.00	2.6	**2.75**
2:53:00	5.55	66.6		2:56:00	5.96	71.5	3.00	4.9	**1.47**
2:56:00	5.96	71.5		2:59:00	6.47	77.6	3.00	6.1	**1.19**
2:59:00	6.47	77.6		3:02:00	6.73	80.8	3.00	3.1	**2.33**
3:02:00	4.23	50.8		3:05:00	7.00	84.0	3.00	33.2	**0.22**
3:05:00	7.00	84.0		3:13:00	7.11	85.3	8.00	1.3	**14.66**
3:13:00	3.40	40.8	X	3:16:00	5.18	62.2	3.00	21.4	**0.34**
3:16:00	5.18	62.2		3:19:00	6.06	72.7	3.00	10.6	**0.69**
3:19:00	6.06	72.7		3:22:00	6.71	80.5	3.00	7.8	**0.93**
3:22:00	6.71	80.5		3:25:00	7.07	84.8	3.00	4.3	**1.68**

*Depth below reference datum

Average (last 4 readings) = 0.91

**Corrected for full depth gravel in annulus

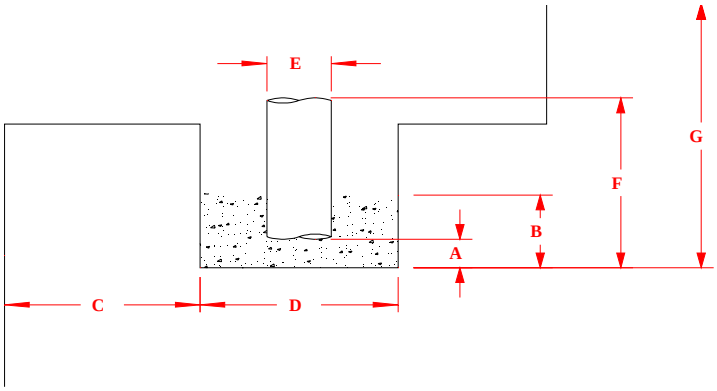
BSK ASSOCIATES

PERCOLATION TEST DATA SHEET

FIGURE A-6

550 W. Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2868
Fax: (559) 497-2886

Project Name:	Jasmine Solar	Project No.:	G20-268-10F
Project Location:	Mettler, Kern County, CA	Pit No.:	P-2



A.	Gravel Layer Depth, in.	3
B.	Total Gravel Thickness, in.	10
C.	Distance from Shelf, ft.	N/A
D.	Hole Diameter, in.	8
E.	Case Diameter, in.	2.5
F.	Reference Depth, in.	71
G	Hole Depth, in.	62
	Depth to Groundwater	N/A
Soil Type:	Sandy Clay (CL)	

Date & Time Saturated: 12/9/20 11:38 AM
Depth of Water after 24-hour Saturation: No water remaining

Begin Test	Initial Depth to Water (ft)	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water (ft)	Final Depth to Water*, in.	Test Duration, min.	Water Drop, in.	**Drop Rate min./in.****
12:20:00	3.35	40.2	X	12:23:00	4.82	57.8	3.00	17.6	**0.41**
12:23:00	4.82	57.8		12:25:00	5.21	62.5	2.00	4.7	**1.03**
12:25:00	5.21	62.5		12:26:00	5.50	66.0	1.00	3.5	**0.69**
12:26:00	5.50	66.0		12:33:00	5.73	68.8	7.00	2.8	**6.13**
12:33:00	2.31	27.7	X	12:34:00	3.90	46.8	1.00	19.1	**0.13**
12:34:00	3.90	46.8		12:35:00	4.37	52.4	1.00	5.6	**0.43**
12:35:00	4.37	52.4		12:36:00	4.55	54.6	1.00	2.2	**1.12**
12:36:00	4.55	54.6		12:37:00	4.69	56.3	1.00	1.7	**1.44**
12:37:00	4.69	56.3		12:38:00	5.75	69.0	1.00	12.7	**0.19**
12:38:00	5.75	69.0		12:45:00	4.90	58.8	7.00	-	**-**
12:45:00	2.10	25.2	X	12:46:00	3.93	47.2	1.00	22.0	**0.11**
12:46:00	3.93	47.2		12:47:00	4.43	53.2	1.00	6.0	**0.40**
12:47:00	4.43	53.2		12:48:00	4.51	54.1	1.00	1.0	**2.52**
12:48:00	4.51	54.1		12:49:00	4.71	56.5	1.00	2.4	**2.25**
12:49:00	4.71	56.5		12:50:00	4.83	58.0	1.00	1.4	**0.00**
12:50:00	4.83	58.0		12:51:00	4.90	58.8	1.00	0.8	**0.00**
12:51:00	4.90	58.8		12:52:00	4.96	59.5	1.00	0.7	**0.00**
12:52:00	4.96	59.5		12:53:00	5.00	60.0	1.00	0.5	**5.04**
12:53:00	5.00	60.0		12:54:00	5.05	60.6	1.00	0.6	**4.03**
12:54:00	5.05	60.6		12:55:00	5.10	61.2	1.00	0.6	**4.03**
12:55:00	5.10	61.2		12:56:00	5.15	61.8	1.00	0.6	**4.03**
12:56:00	5.15	61.8		12:57:00	5.20	62.4	1.00	0.6	**4.03**
12:57:00	5.20	62.4		12:58:00	5.25	63.0	1.00	0.6	**4.03**
12:58:00	5.25	63.0		12:59:00	5.30	63.6	1.00	0.6	**4.03**
12:59:00	5.30	63.6		13:00:00	5.35	64.2	1.00	0.6	**4.03**
13:00:00	5.35	64.2		13:01:00	5.41	64.9	1.00	0.7	**3.36**
13:01:00	5.41	64.9		13:02:00	5.50	66.0	1.00	1.1	**2.24**

*Depth below reference datum

Average (last 4 readings) = 3.86

**Corrected for full depth gravel in annulus

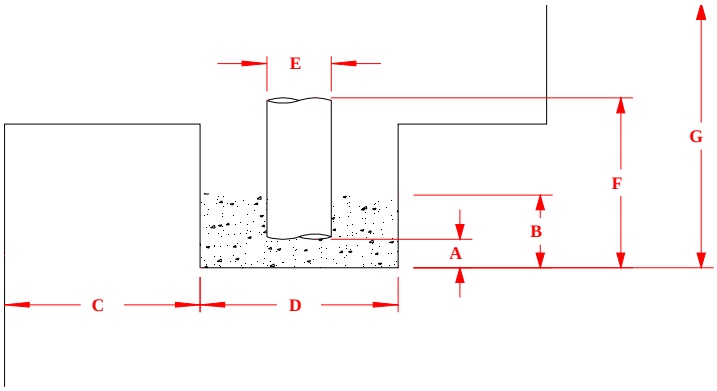
ASSOCIATES

PERCOLATION TEST DATA SHEET

FIGURE A-7

550 W. Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2868
Fax: (559) 497-2886

Project Name:	Jasmine Solar	Project No.:	G20-268-10F
Project Location:	Mettler, Kern County, CA	Pit No.:	P-3



A.	Gravel Layer Depth, in.	4
B.	Total Gravel Thickness, in.	12
C.	Distance from Shelf, ft.	N/A
D.	Hole Diameter, in.	8
E.	Case Diameter, in.	2.5
F.	Reference Depth, in.	76
G	Hole Depth, in.	62
	Depth to Groundwater	N/A
Soil Type:	Sandy Silt (ML)	

Date & Time Saturated: 12/9/20 12:00 PM

Depth of Water after 24-hour Saturation: No water remaining

Begin Test	Initial Depth to Water (ft)	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water (ft)	Final Depth to Water*, in.	Test Duration, min.	Water Drop, in.	**Drop Rate min./in.****
10:40:00	2.18	26.2	X	10:43:00	2.87	34.4	3.00	8.3	**0.88**
10:43:00	2.87	34.4		10:46:00	3.48	41.8	3.00	7.3	**0.99**
10:46:00	3.48	41.8		10:49:00	4.26	51.1	3.00	9.4	**0.78**
10:49:00	4.26	51.1		10:52:00	4.86	58.3	3.00	7.2	**1.01**
10:52:00	4.86	58.3		10:55:00	5.35	64.2	3.00	5.9	**1.23**
10:55:00	5.35	64.2		10:58:00	5.41	64.9	3.00	0.7	**10.67**
10:58:00	5.41	64.9		11:01:00	5.68	68.2	3.00	3.3	**2.21**
11:01:00	5.68	68.2		11:06:00	6.03	72.4	5.00	4.2	**2.88**
11:06:00	2.02	24.2	X	11:09:00	3.32	39.8	3.00	15.6	**0.47**
11:09:00	3.32	39.8		11:12:00	4.40	52.8	3.00	13.0	**0.56**
11:12:00	4.40	52.8		11:15:00	5.20	62.4	3.00	9.6	**0.76**
11:15:00	5.20	62.4		11:18:00	5.82	69.8	3.00	7.4	**0.98**
11:18:00	5.82	69.8		11:27:00	6.19	74.3	9.00	4.4	**4.90**
11:27:00	2.01	24.1	X	11:30:00	2.52	30.2	3.00	6.2	**2.44**
11:30:00	2.52	30.2		11:33:00	3.08	37.0	3.00	6.7	**0.00**
11:33:00	3.08	37.0		11:36:00	3.22	38.6	3.00	1.7	**0.00**
11:36:00	3.22	38.6		11:39:00	3.49	41.9	3.00	3.2	**0.00**
11:39:00	3.49	41.9		11:42:00	3.73	44.8	3.00	2.9	**2.52**
11:42:00	3.73	44.8		11:45:00	3.95	47.4	3.00	2.6	**2.75**
11:45:00	3.95	47.4		11:48:00	4.12	49.4	3.00	2.0	**3.56**
11:48:00	4.12	49.4		11:52:00	4.41	52.9	4.00	3.5	**2.78**
11:52:00	4.41	52.9		11:55:00	4.56	54.7	3.00	1.8	**4.03**
11:55:00	4.56	54.7		11:58:00	4.73	56.8	3.00	2.0	**3.56**
11:58:00	4.73	56.8		12:01:00	5.00	60.0	3.00	3.2	**2.24**

*Depth below reference datum

Average (last 4 readings) = 3.15

**Corrected for full depth gravel in annulus

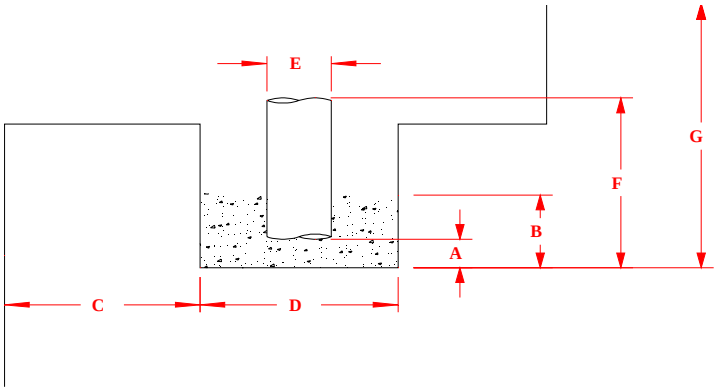
ASSOCIATES

PERCOLATION TEST DATA SHEET

FIGURE A-8

550 W. Locust Ave.
Fresno, CA 93650
Ph: (559) 497-2868
Fax: (559) 497-2886

Project Name:	Jasmine Solar	Project No.:	G20-268-10F
Project Location:	Mettler, Kern County, CA	Pit No.:	P-4



A.	Gravel Layer Depth, in.	3
B.	Total Gravel Thickness, in.	10
C.	Distance from Shelf, ft.	N/A
D.	Hole Diameter, in.	8
E.	Case Diameter, in.	2.5
F.	Reference Depth, in.	71
G	Hole Depth, in.	62
	Depth to Groundwater	N/A
Soil Type:	Sandy Clay (CL)	

Date & Time Saturated: 12/9/20 11:38 AM
Depth of Water after 24-hour Saturation: No water remaining

Begin Test	Initial Depth to Water (ft)	Initial Depth to Water*, in.	Refilled	End Test	Final Depth to Water (ft)	Final Depth to Water*, in.	Test Duration, min.	Water Drop, in.	**Drop Rate min./in.****
8:24:00	3.50	42.0	X	12:23:00	4.12	49.4	239.00	7.4	**77.69**
8:32:00	4.12	49.4		12:25:00	4.30	51.6	233.00	2.2	**260.89**
8:35:00	4.30	51.6		12:26:00	4.45	53.4	231.00	1.8	**310.38**
8:39:00	4.45	53.4		12:33:00	4.55	54.6	234.00	1.2	**471.61**
8:42:00	4.55	54.6		12:34:00	4.70	56.4	232.00	1.8	**311.72**
8:45:00	4.70	56.4		12:35:00	4.81	57.7	230.00	1.3	**421.41**
8:48:00	4.81	57.7		12:36:00	4.85	58.2	228.00	0.5	**1148.80**
8:51:00	4.85	58.2		12:37:00	5.00	60.0	226.00	1.8	**303.66**
8:56:00	1.83	22.0	X	12:38:00	2.79	33.5	222.00	11.5	**46.61**
9:00:00	2.79	33.5		12:45:00	2.92	35.0	225.00	1.6	**348.82**
9:03:00	2.92	35.0		12:46:00	3.29	39.5	223.00	4.4	**121.47**
9:06:00	3.29	39.5		12:47:00	3.55	42.6	221.00	3.1	**171.31**
9:09:00	3.55	42.6		12:48:00	3.73	44.8	219.00	2.2	**245.21**
9:12:00	3.73	44.8		12:49:00	3.95	47.4	217.00	2.6	**471.19**
9:15:00	3.95	47.4		12:50:00	4.13	49.6	215.00	2.2	**0.00**
9:18:00	4.13	49.6		12:51:00	4.30	51.6	213.00	2.0	**0.00**
9:22:00	4.30	51.6		12:52:00	4.40	52.8	210.00	1.2	**0.00**
9:25:00	4.40	52.8		12:53:00	4.51	54.1	208.00	1.3	**381.10**
9:28:00	4.51	54.1		12:54:00	4.60	55.2	206.00	1.1	**461.31**
9:31:00	4.60	55.2		12:55:00	4.67	56.0	204.00	0.8	**587.35**
9:34:00	4.67	56.0		12:56:00	4.76	57.1	202.00	1.1	**452.35**
9:37:00	4.76	57.1		12:57:00	4.80	57.6	200.00	0.5	**1007.72**
9:40:00	4.80	57.6		12:58:00	4.85	58.2	198.00	0.6	**798.11**
9:43:00	4.85	58.2		12:59:00	4.92	59.0	196.00	0.8	**564.32**
9:49:00	1.71	20.5	X	13:00:00	2.52	30.2	191.00	9.7	**47.52**
9:54:00	2.52	30.2		13:01:00	2.92	35.0	187.00	4.8	**94.22**
9:57:00	2.92	35.0		13:02:00	3.20	38.4	185.00	3.4	**133.16**
10:00:00	3.20	38.4		14:02:00	3.43	41.2	242.00	2.8	**212.06**
10:03:00	3.43	41.2		15:02:00	3.51	42.1	299.00	1.0	**753.27**
10:06:00	3.51	42.1		16:02:00	3.58	43.0	356.00	0.8	**1024.99**
10:09:00	3.58	43.0		17:02:00	3.75	45.0	413.00	2.0	**489.63**
10:13:00	3.75	45.0		18:02:00	3.94	47.3	469.00	2.3	**497.49**
10:16:00	3.94	47.3		19:02:00	3.98	47.8	526.00	-	**-**
10:19:00	3.98	47.8		20:02:00	4.21	50.5	583.00	2.8	**510.87**

*Depth below reference datum

Average (last 4 readings) = 630.75

**Corrected for full depth gravel in annulus

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 in the boring log in Appendix A.

Direct Shear Test

Six (6) Direct Shear Tests were performed on relatively undisturbed soil sample obtained at the time of drilling in the area of planned construction. The test was 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-6.

Moisture-Density Relationship Test

One (1) Moisture-Density Relationship Test was performed on a bulk soil sample obtained at the time of drilling in the area of planned construction. The soil sample was tested for optimum moisture content and maximum dry density per ASTM Test Method D1557. The test results are presented on Figure B-7.

Collapse Potential Test

Six (6) Collapse Potential Tests were 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-8 through B-13.

California Bearing Ratio Test

One (1) California Bearing Ratio (CBR) Test was performed on a bulk soil sample obtained at the time of drilling in the area of planned construction. The soil was tested to evaluate the subgrade material for pavement design. The test was performed in general accordance with ASTM Test Method D1883. The test results are presented on Figure B-14.

Soil Corrosivity

Twenty (20) corrosivity evaluations were performed on soil samples obtained at the time of drilling. The corrosivity testing was performed by Sunland Analytical Laboratories of Rancho Cordova, CA for minimum resistivity (ASTM G51), sulfate (ASTM G200), chloride (ASTM C1580), pH (ASTM G187), and redox potential (ASTM D5212). The test results are presented in Table B-1 below.

Table B-1: Summary of Corrosion Test Results					
Sample Location	pH	Sulfate, ppm	Chloride, ppm	Minimum Resistivity, ohm-cm	Redox Potential (mv)
B-1 @ 0.5 feet bgs	8.78	8210.1	813.4	60	+ 114
B-1 @ 5 feet bgs	8.48	4219.7	416.5	120	+ 128
B-3 @ 0.5 feet bgs	7.92	3423.7	992.4	120	+ 138
B-3 @ 5 feet bgs	7.90	1127.8	77.5	230	+ 145
B-9 @ 0.5 feet bgs	8.29	1846.9	79.7	160	+ 152
B-9 @ 5 feet bgs	8.20	1934.8	280.5	140	+ 143
B-11 @ 0.5 feet bgs	7.47	3398.2	43.4	200	+ 165
B-11 @ 5 feet bgs	7.64	2674.1	76.0	160	+ 155
B-15 @ 0.5 feet bgs	7.89	3399.3	107.7	250	+ 169
B-15 @ 5 feet bgs	8.30	2374.3	337.6	120	+ 164
B-19 @ 0.5 feet bgs	8.02	2327.7	76.9	190	+ 170
B-19 @ 5 feet bgs	7.60	566.6	77.5	800	+ 186
B-23 @ 0.5 feet bgs	7.16	1517.1	7.5	270	+ 206
B-23 @ 5 feet bgs	7.58	1217.7	4.5	180	+ 193
B-25 @ 0.5 feet bgs	7.53	1455.3	62.4	210	+ 185
B-25 @ 5 feet bgs	7.70	1513.0	58.2	250	+ 184
B-28 @ 0.5 feet bgs	7.53	2588.9	1063.0	140	+ 180
B-28 @ 5 feet bgs	7.69	1304.6	1023.7	180	+ 181
B-29 @ 0.5 feet bgs	7.82	50.4	3.5	2,170	+ 191
B-29 @ 5 feet bgs	7.87	44.5	3.2	1,340	+ 194

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550 W. Locust
Fresno, CA 93650
Ph: (559) 497-2880
Fax: (559) 497-2886

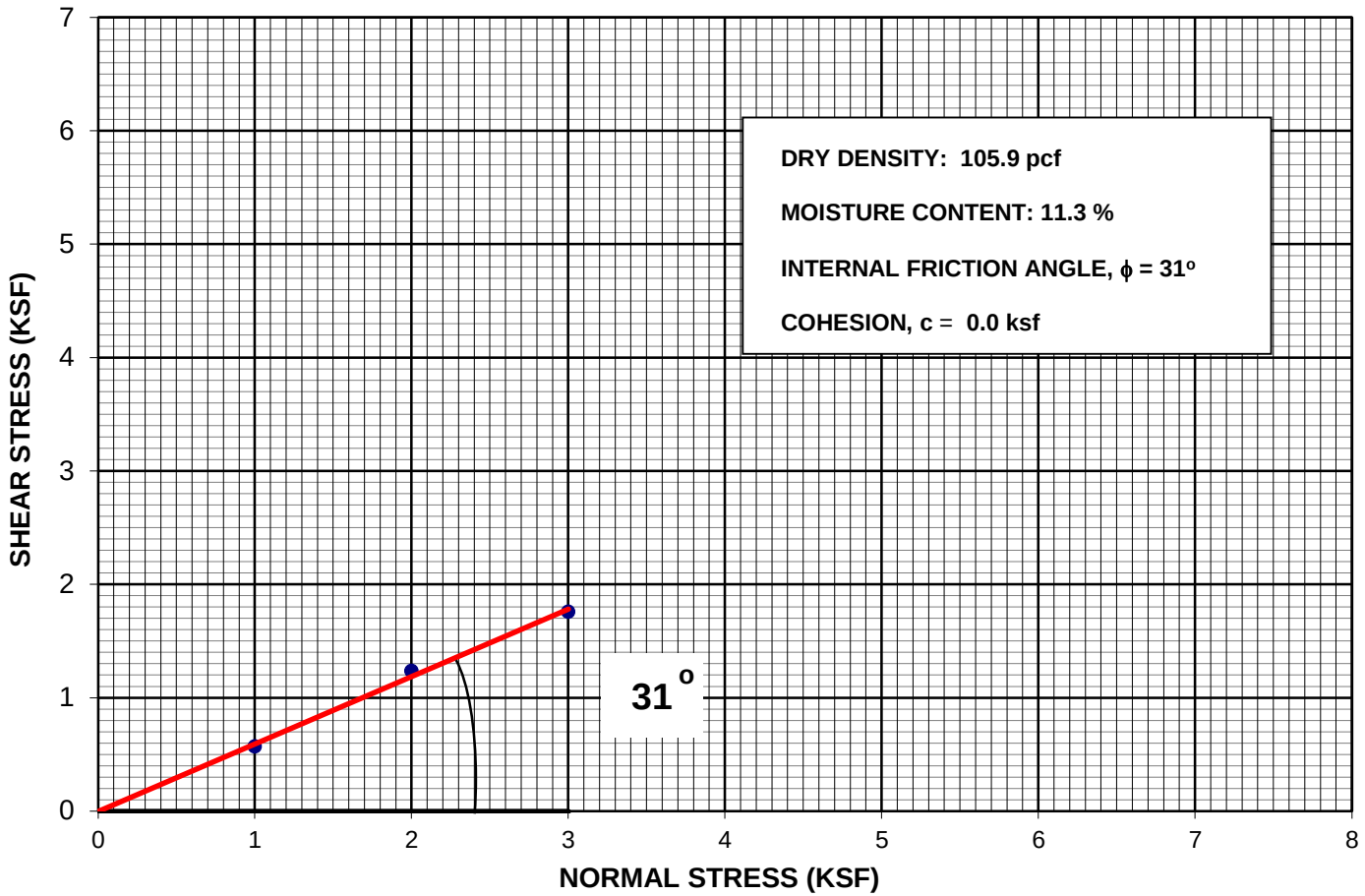
Direct Shear Test

ASTM D-3080

FIGURE B-1

Project Name:	Jasmine Solar	**Sampled By:**	J.L.	**Sample Date:**	12/9/2020
		Tested By:	D.M.	**Test Date:**	12/22/2020
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 3 @ 2'	**Sample Description:**	ML: Sandy SILT: brown, moist, fine to medium grained		

SHEAR STRENGTH DIAGRAM



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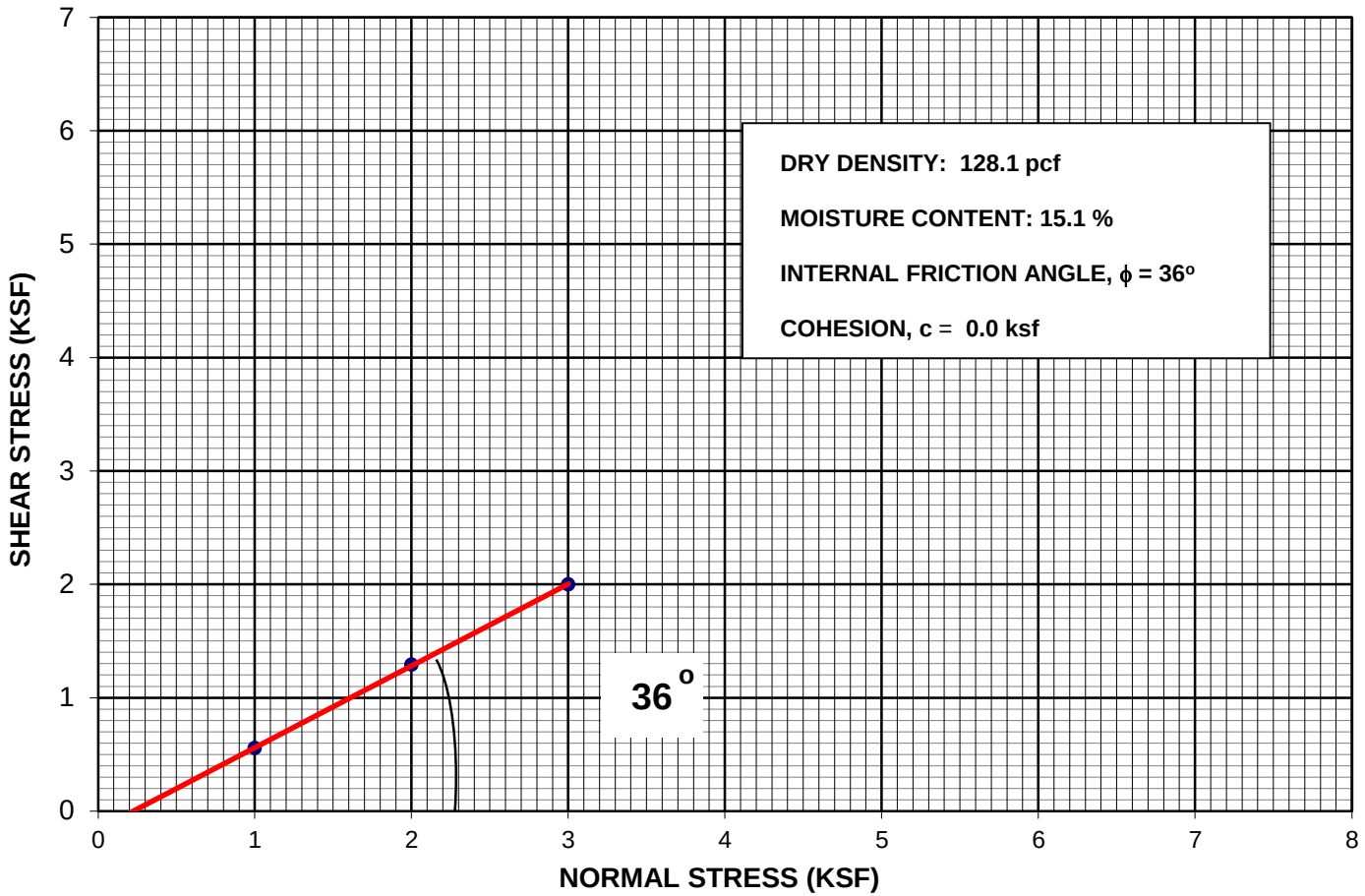
Direct Shear Test

ASTM D-3080

FIGURE B-2

Project Name:	Jasmine Solar	**Sampled By:**	J.L.	**Sample Date:**	12/9/2020
		Tested By:	D.M.	**Test Date:**	12/23/2020
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 9 @ 2'	**Sample Description:**	SM: Silty SAND: brown, moist, fine to coarse grained		

SHEAR STRENGTH DIAGRAM



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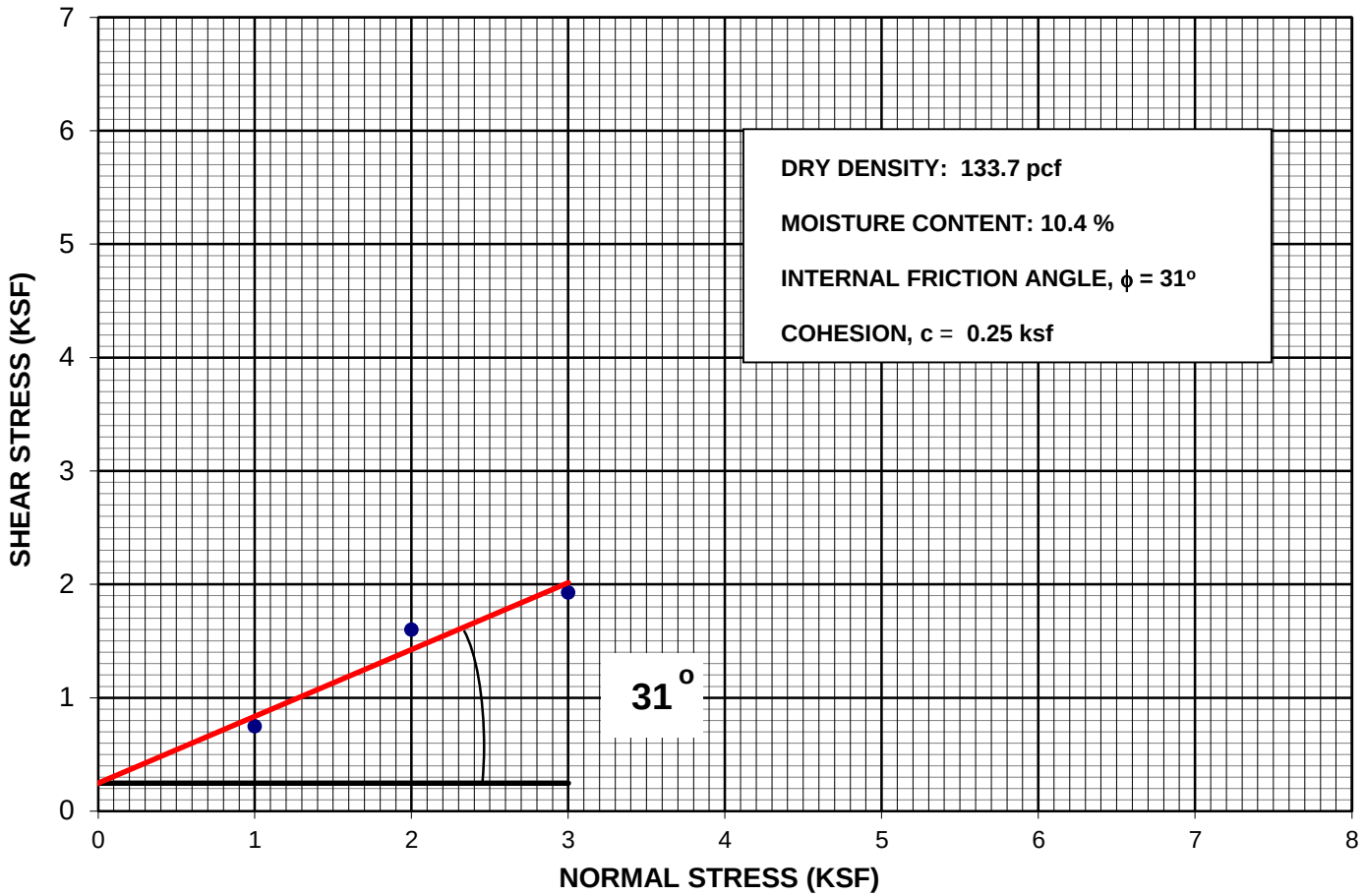
Direct Shear Test

ASTM D-3080

FIGURE B-3

Project Name:	Jasmine Solar	**Sampled By:**	J.L.	**Sample Date:**	12/8/2020
		Tested By:	D.M.	**Test Date:**	12/24/2020
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 14 @ 2'	**Sample Description:**	ML: Sandy SILT: brown, moist, fine to medium grained		

SHEAR STRENGTH DIAGRAM



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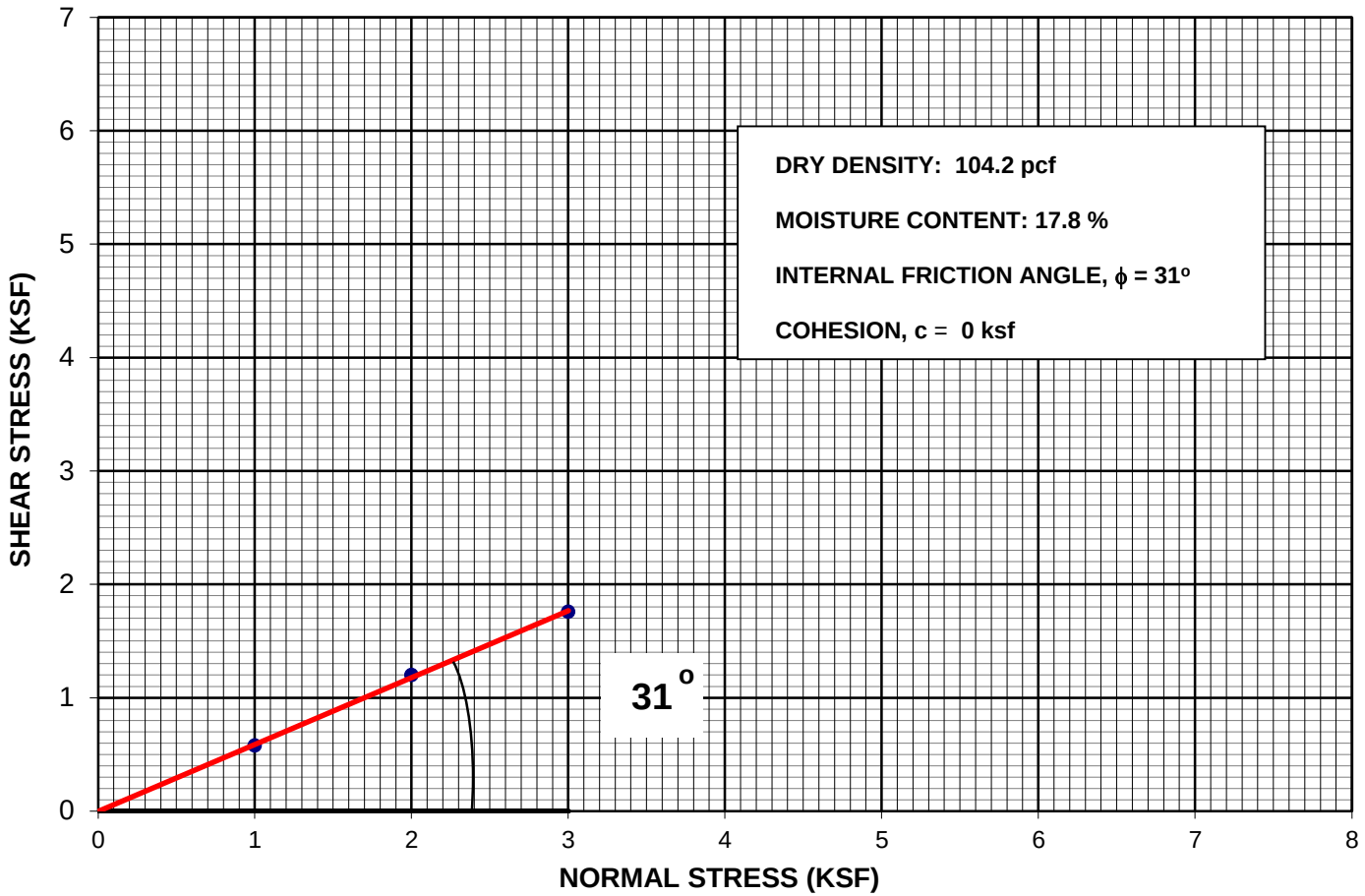
Direct Shear Test

ASTM D-3080

FIGURE B-4

Project Name:	Jasmine Solar	**Sampled By:**	J.L.	**Sample Date:**	12/8/2020
		Tested By:	D.M.	**Test Date:**	12/28/2020
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 17 @ 4'	**Sample Description:**	CL: Sandy Clay: brown, moist, fine to medium grained		

SHEAR STRENGTH DIAGRAM



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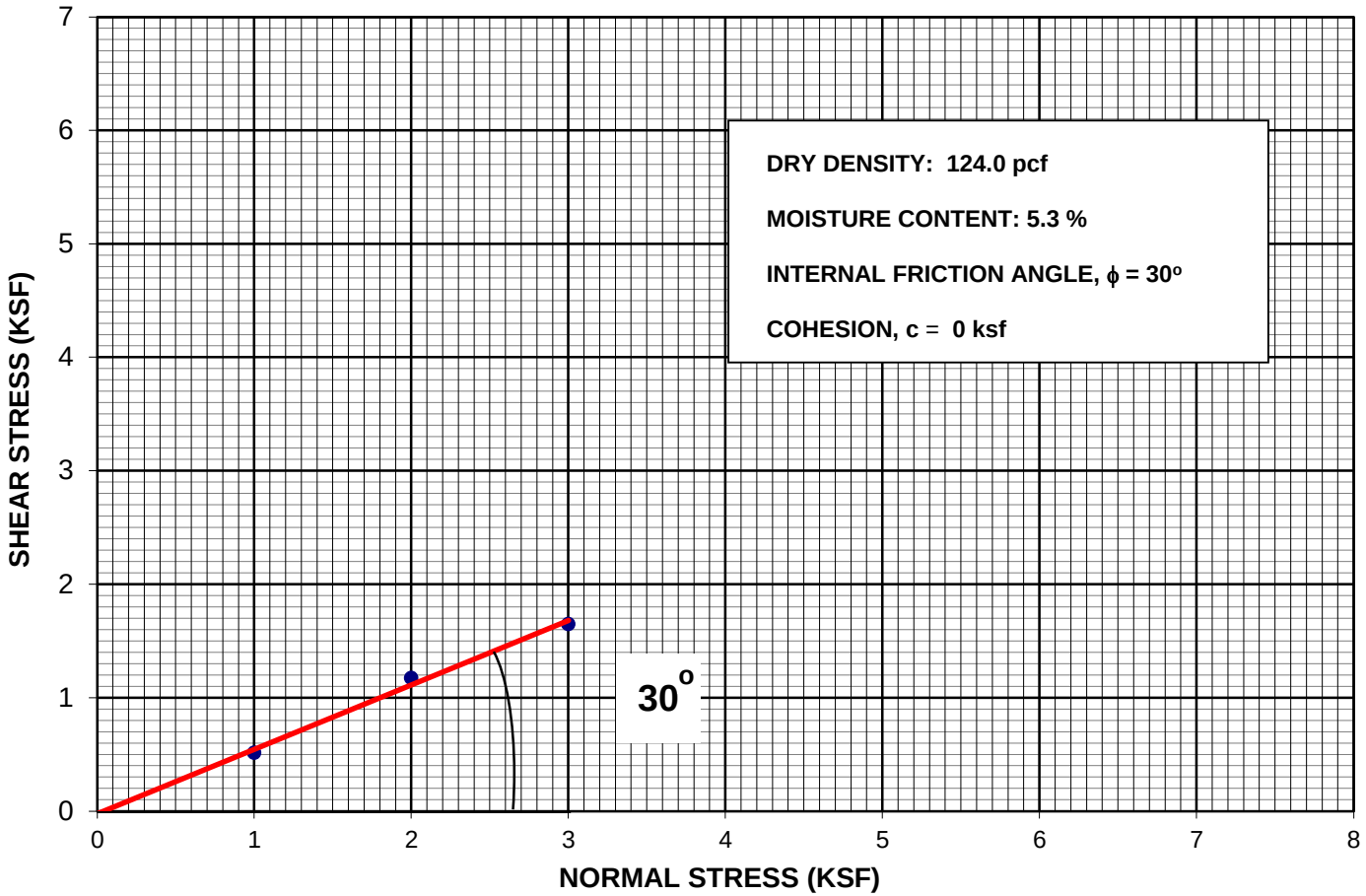
FIGURE B-5

Direct Shear Test

ASTM D-3080

Project Name:	Jasmine Solar	**Sampled By:**	S.J.	**Sample Date:**	12/7/2020
		Tested By:	D.M.	**Test Date:**	12/28/2020
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 25 @ 6'	**Sample Description:**	SM: Silty Sand: brown, medium dense, slightly moist		

SHEAR STRENGTH DIAGRAM



BSK ASSOCIATES

Direct Shear Test

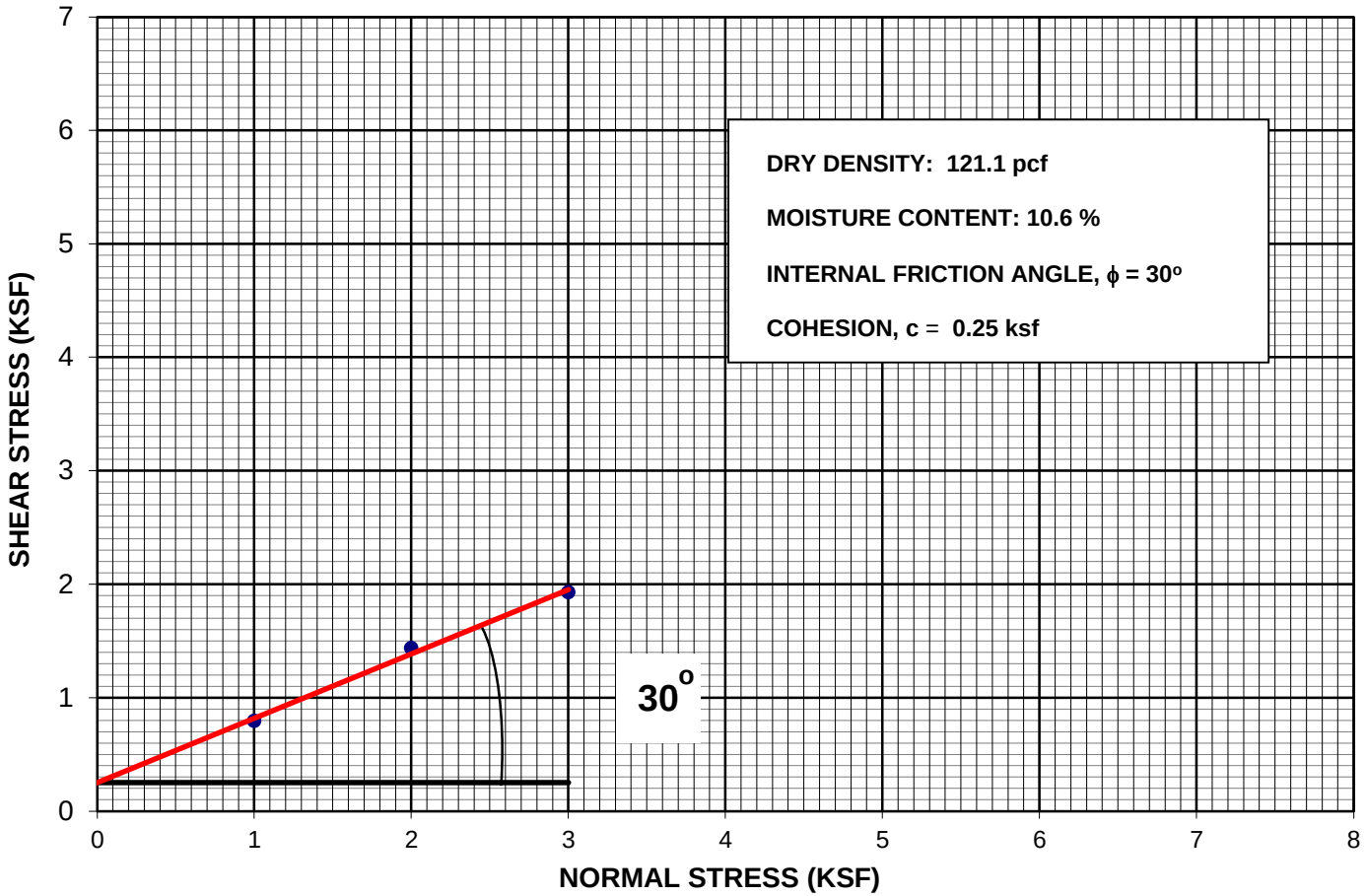
ASTM D-3080

FIGURE B-6

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Project Name:	Jasmine Solar	**Sampled By:**	S.J.	**Sample Date:**	12/7/2020
		Tested By:	D.M.	**Test Date:**	12/29/2021
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/7/2021
Sample Location:	B - 28 @ 3'	**Sample Description:**	SM: Silty Sand: brown, medium dense, moist, fine to coarse grained		

SHEAR STRENGTH DIAGRAM

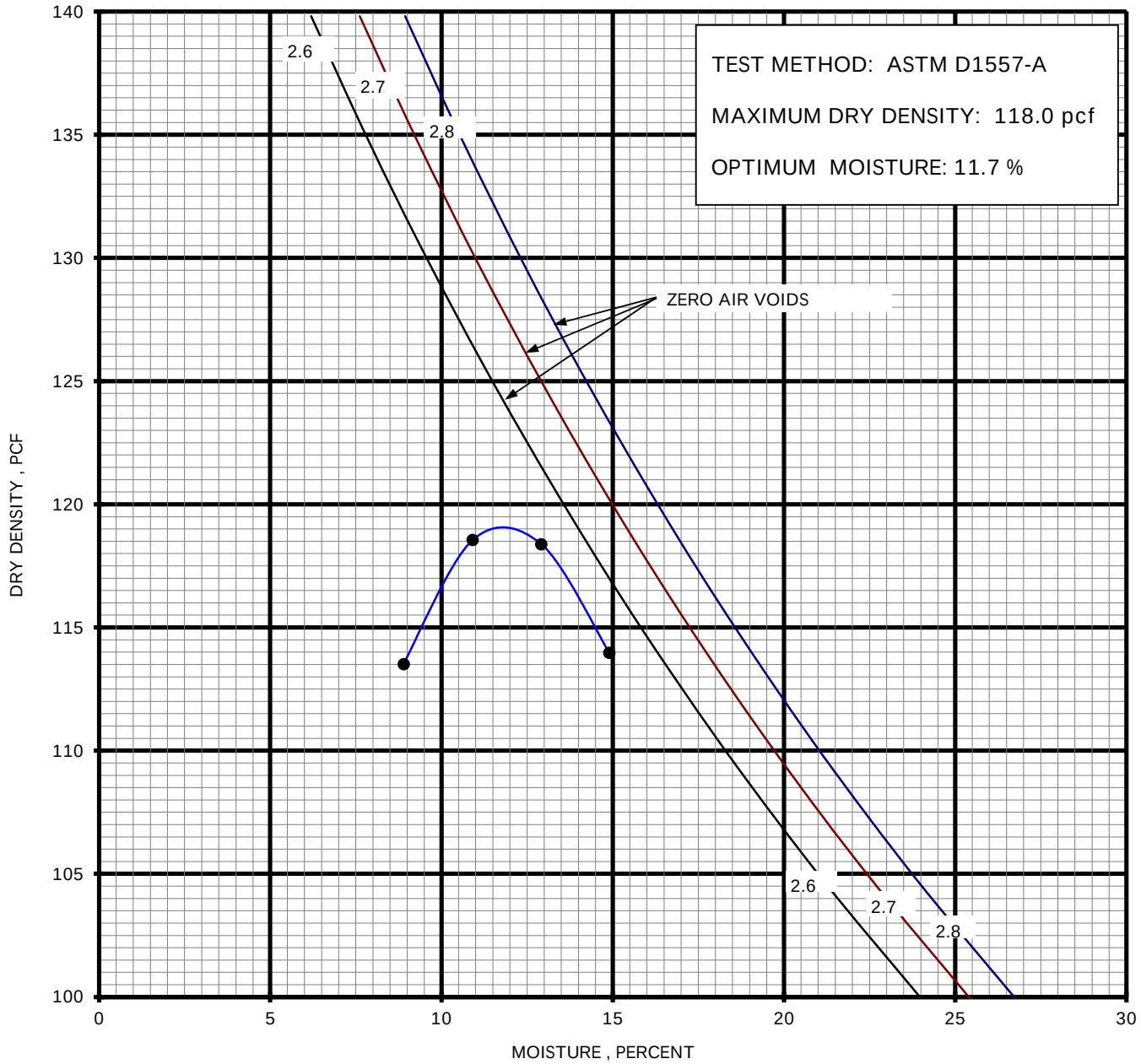


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Fax: (661) 324-4218

FIGURE B-7

MOISTURE DENSITY RELATIONSHIP
ASTM D1557

Project Name:	Jasmine Solar Project	**Project Number:**	G20-268-11F
Project Manager:	O. Lau	**Lab Number:**	B20-210
Sample Location:	B-22 & B-27 @ 0-5 feet bgs (Combined)	**Sample Date:**	12/7/2020
Sample Description:	ML: Sandy Silt, brown, fine to medium, dry		
Tested By:	J. Buenrostro	**Tested Date:** 1/7/2021	**Sample By:** S. Jue



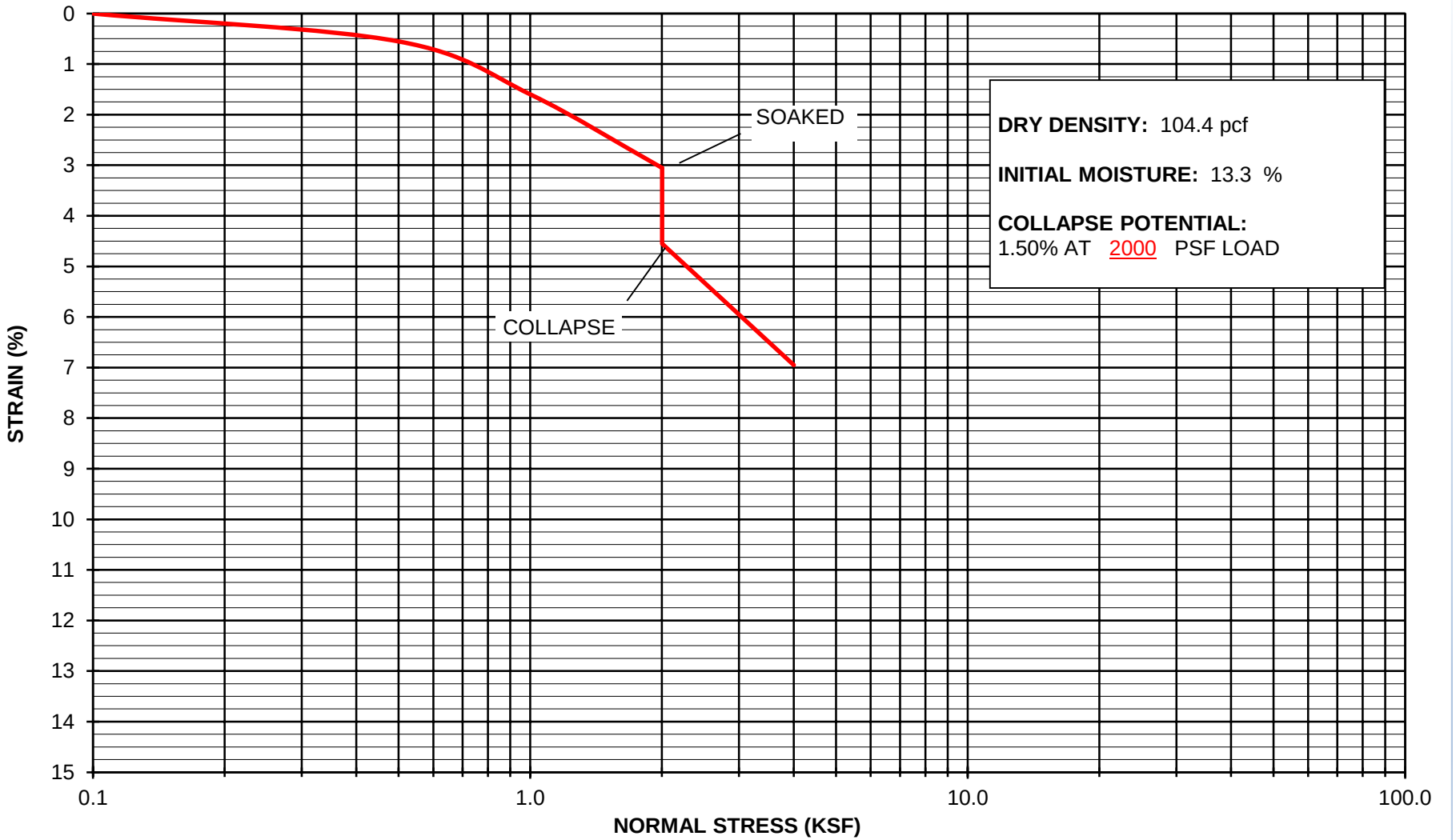
Reviewed by: Ian Remotigue

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FIGURE B-8

COLLAPSE POTENTIAL
ASTM D-5333

Project Name:	Jasmine Solar Project	**Sampled By:**	S. Jue	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/17/20
Project Number:	G20 - 268 -10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 4 @ 5'	**Sample Description:**	SC: Clayey Sand: brown, moist, fine to medium grained		



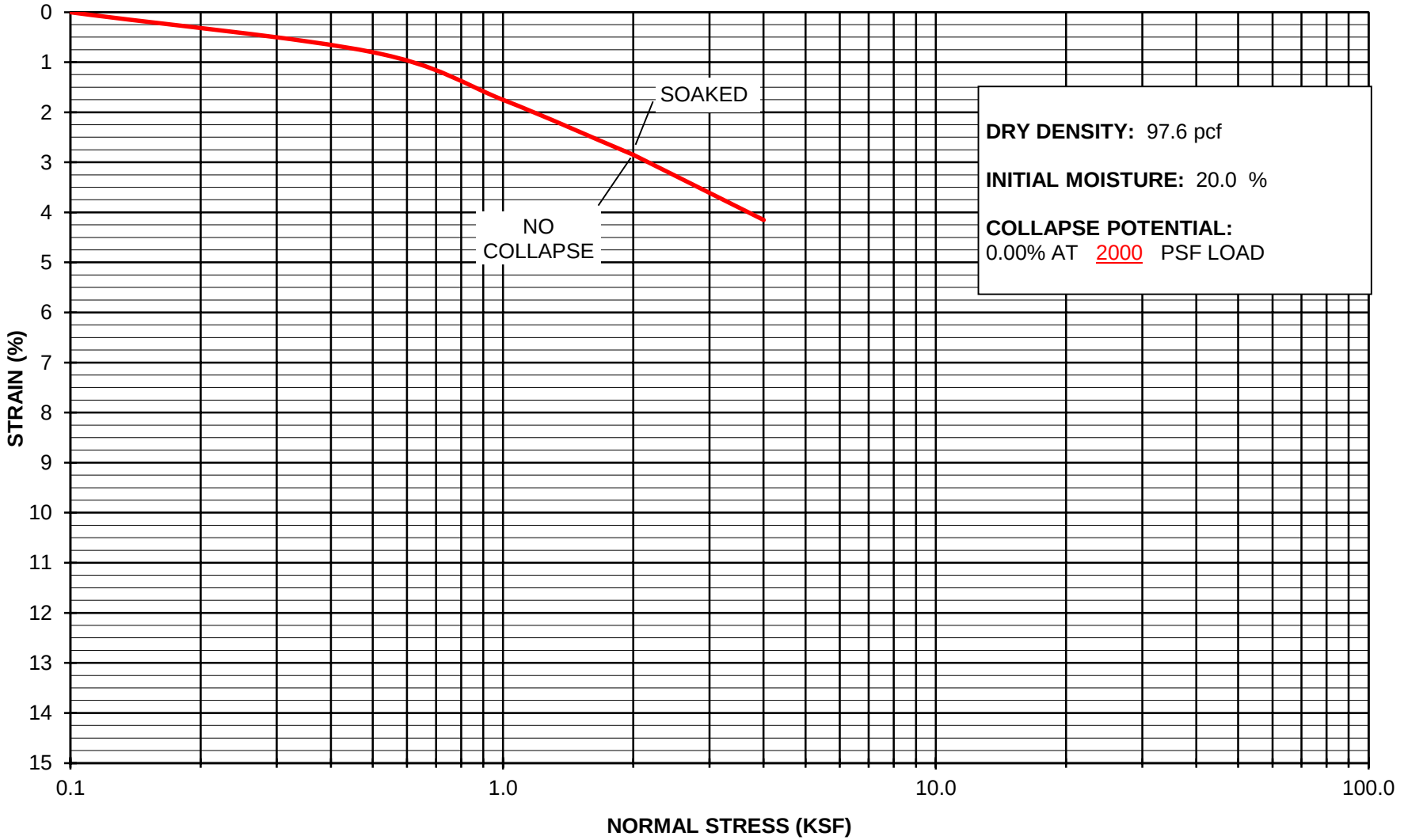
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COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-9

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Project Name:	Jasmine Solar Project	**Sampled By:**	J. Leu	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/21/20
Project Number:	G20 - 268- 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 7 @ 10'	**Sample Description:**	ML: Sandy Silt: brown, moist, fine to medium grained		



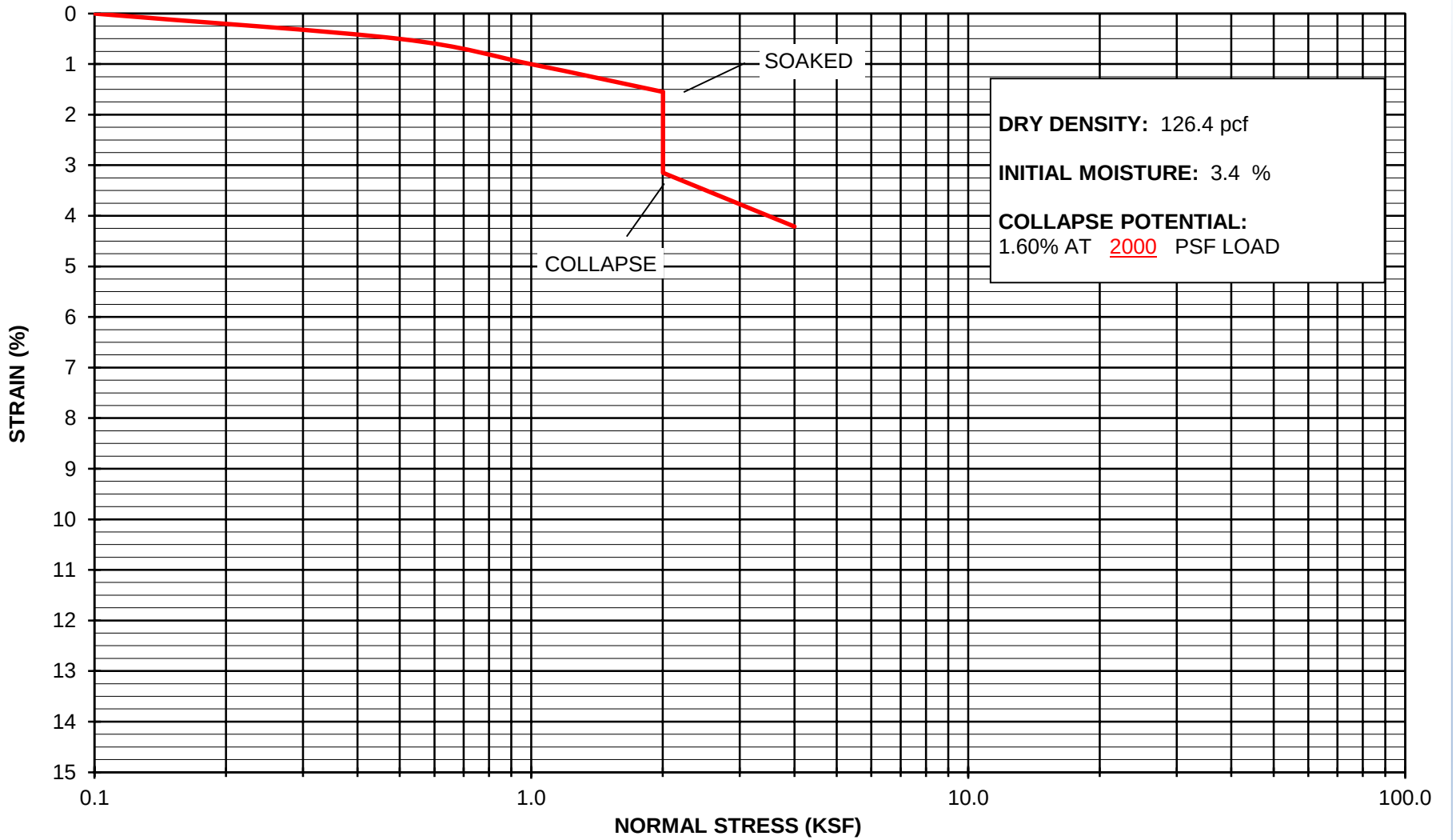
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COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-10

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Project Name:	Jasmine Solar Project	**Sampled By:**	J. Leu	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/21/20
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 12 @ 10'	**Sample Description:**	SP: Poorly Graded Sand with Gravel: brown, moist, fine to coarse grained		



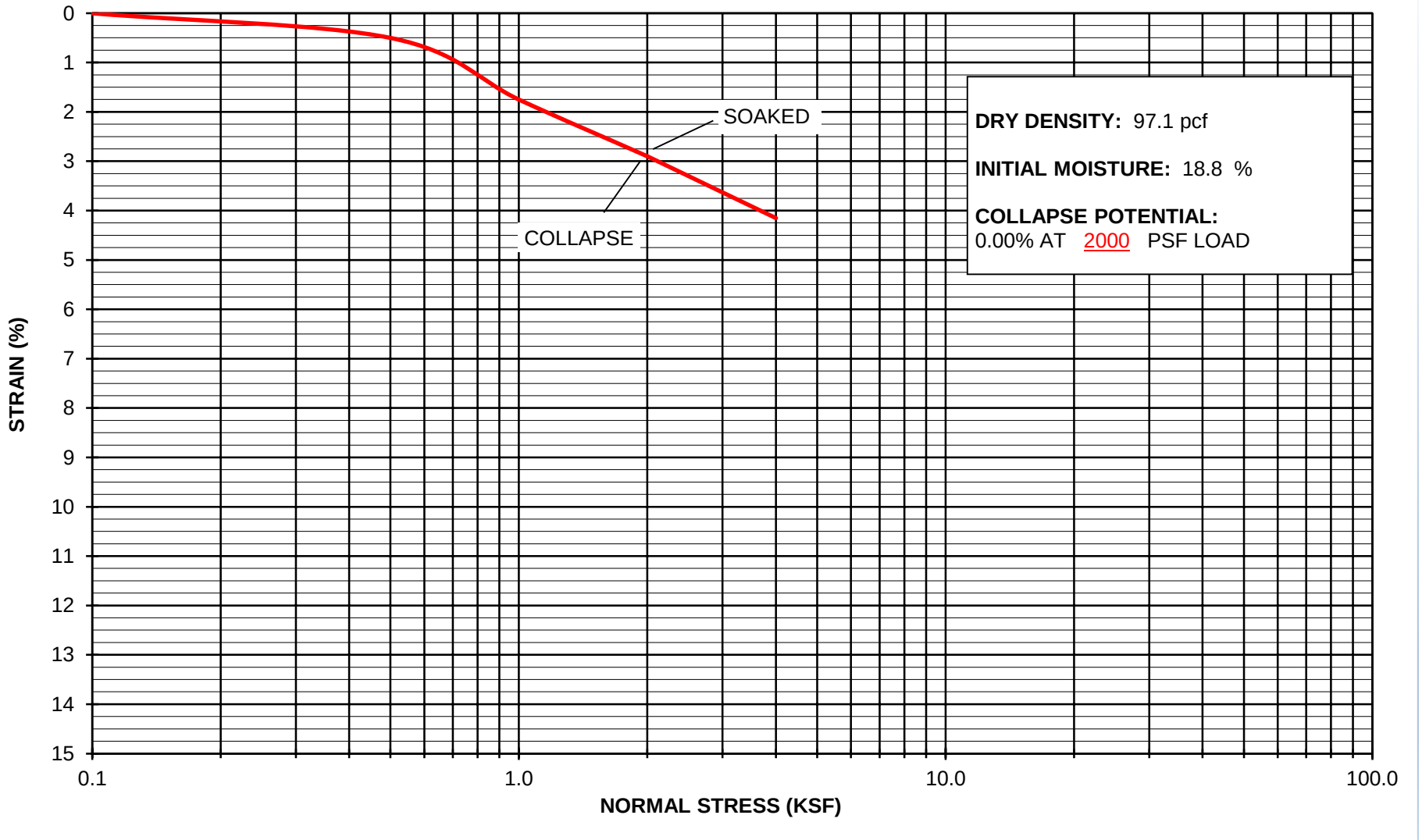
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COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-11

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Project Name:	Jasmine Solar Project	**Sampled By:**	S. Jue	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/22/20
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 15 @ 10'	**Sample Description:**	SM: Silty Sand: brown, moist, fine to medium grained sand, trace clay		

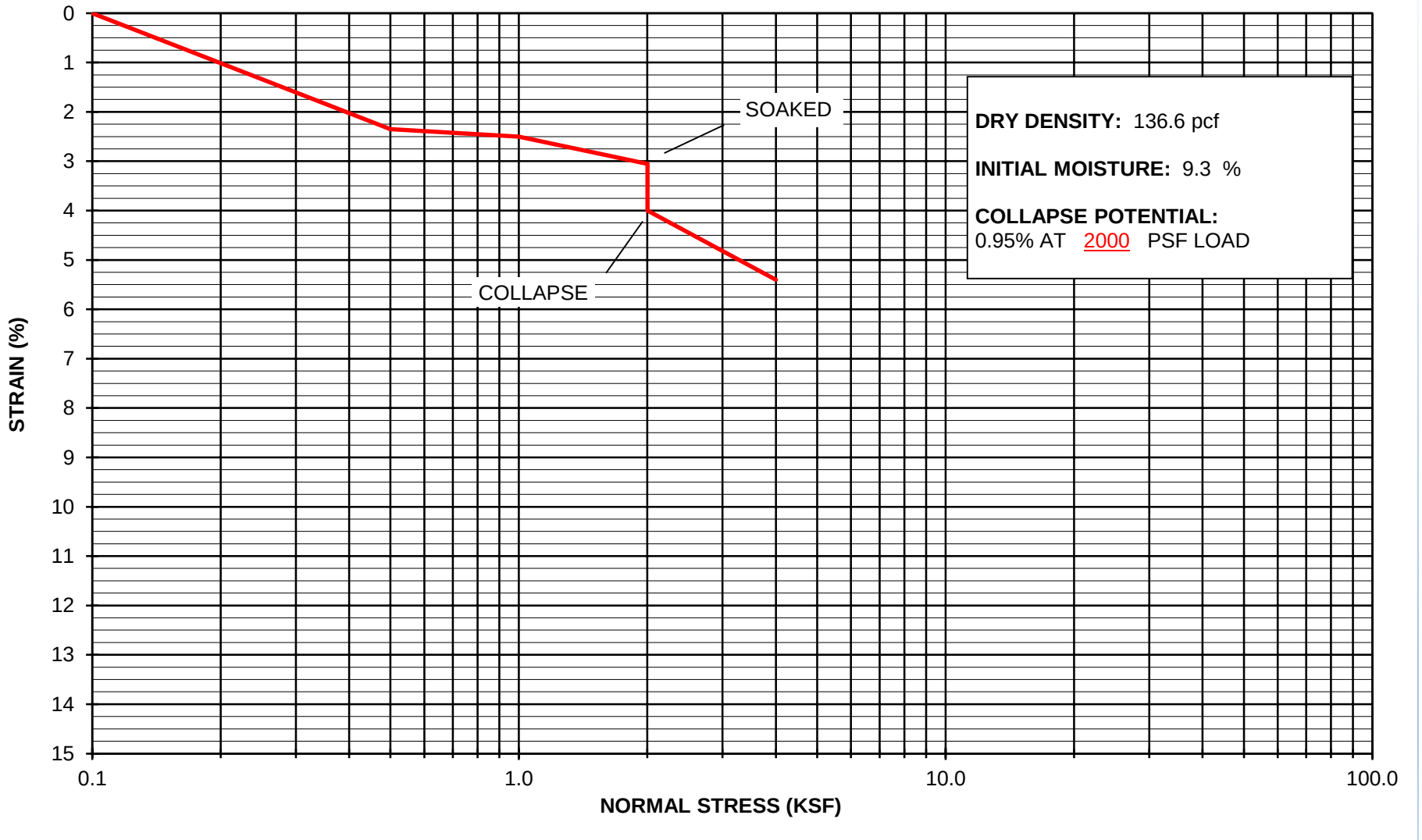


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COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-12

Project Name:	Jasmine Solar Project	**Sampled By:**	S. Jue	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/23/20
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 22 @ 11'	**Sample Description:**	SM: Silty Sand: olive, slightly moist, fine to coarse grained, weakly cemented		

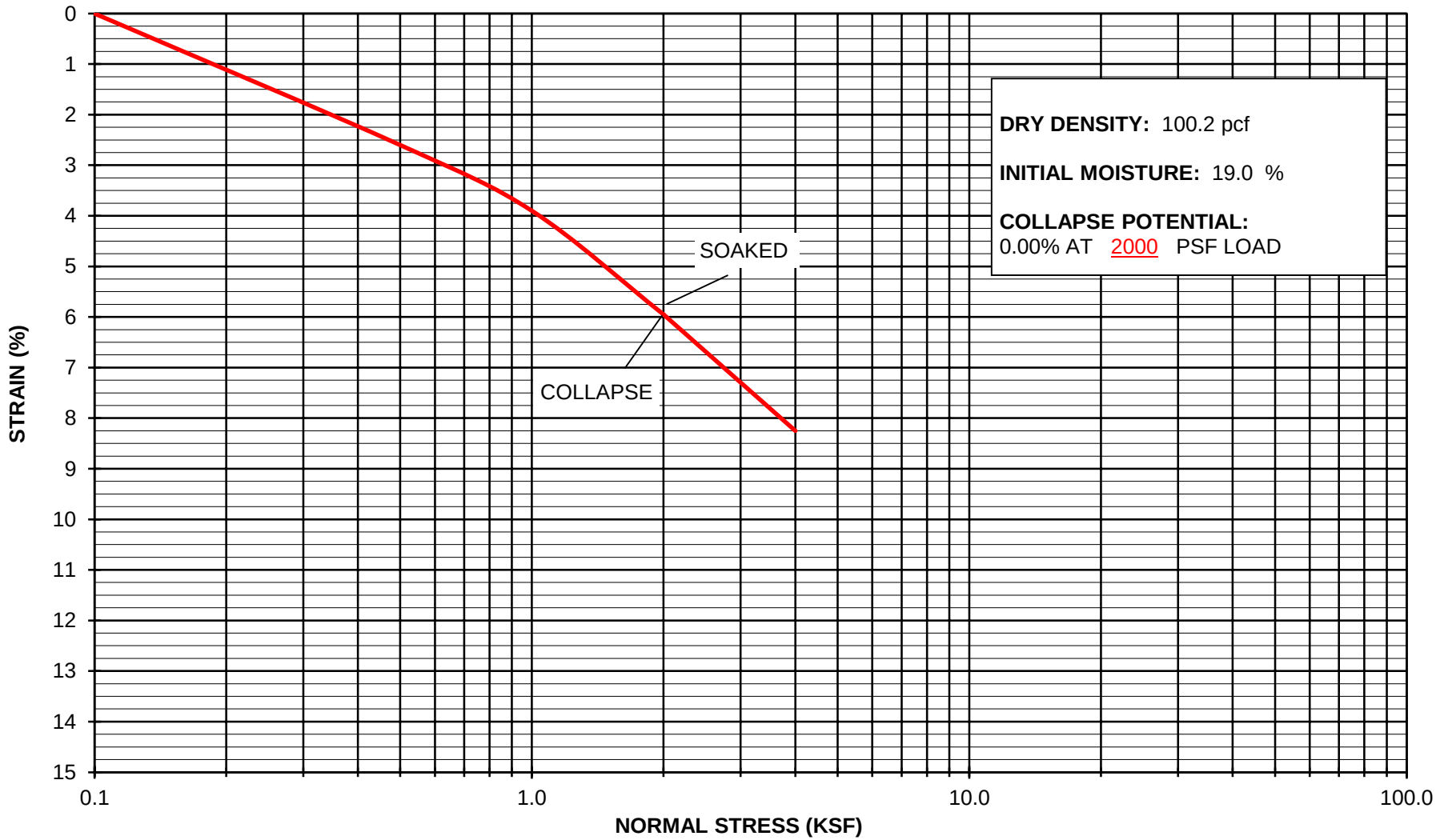


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COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-13

Project Name:	Jasmine Solar Project	**Sampled By:**	S. Jue	**Sample Date:**	12/7/20
		Tested By:	D.Messfin	**Test Date:**	12/30/20
Project Number:	G20 - 268 - 10F	**Lab Tracking ID:**	N/A	**Report Date:**	1/11/21
Sample Location:	B - 27 @ 21'	**Sample Description:**	SC: Clayey Sand: olive, very moist, fine to coarse grained		



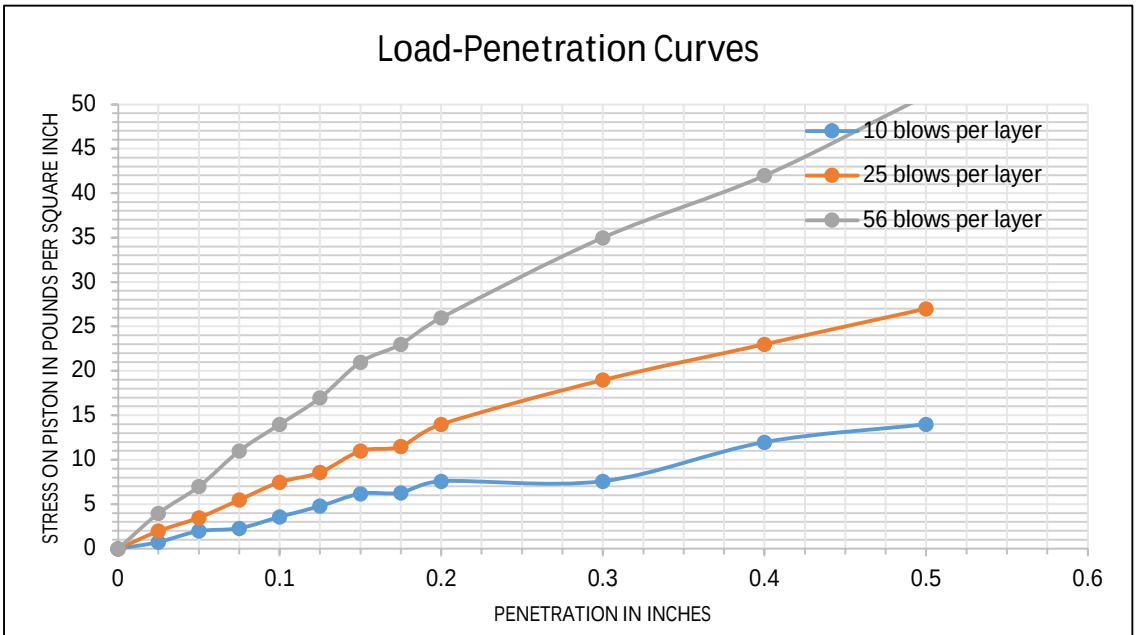
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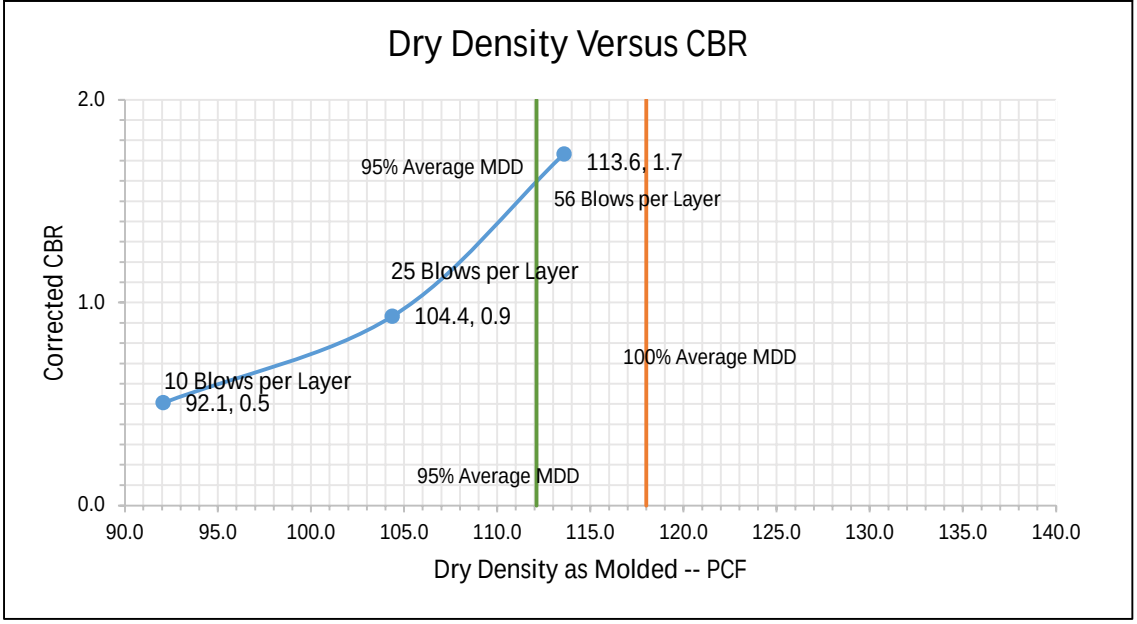
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Fax: (661) 324-4218

CBR (California Bearing Ratio) of Laboratory-Compacted Soils

ASTM D1883

Project Name:	Jasmine Solar Project	Sample Date:	12/7/2021
Project Number:	G20-268-10F	Test Date:	1/21/2021
Sample Location:	Combined B-22 & B-27 @ 0.0-5.0 feet BGS	Sampled by:	S. Jue
Sample Description:	ML: Sandy Silt w/ Clay: brown, moist, fine grained sand	Tested By:	ILTRemotigue





The CBR Test is based off of the compaction test method, ASTM D1557

At the Maximum Dry Density of ASTM D1557:	CBR @ MDD (118.0) =	1.9
At 95% of the Maximum Dry Density of ASTM D1557:	CBR @ 0.95*MDD (112.1) =	1.6

BSK ASSOCIATES

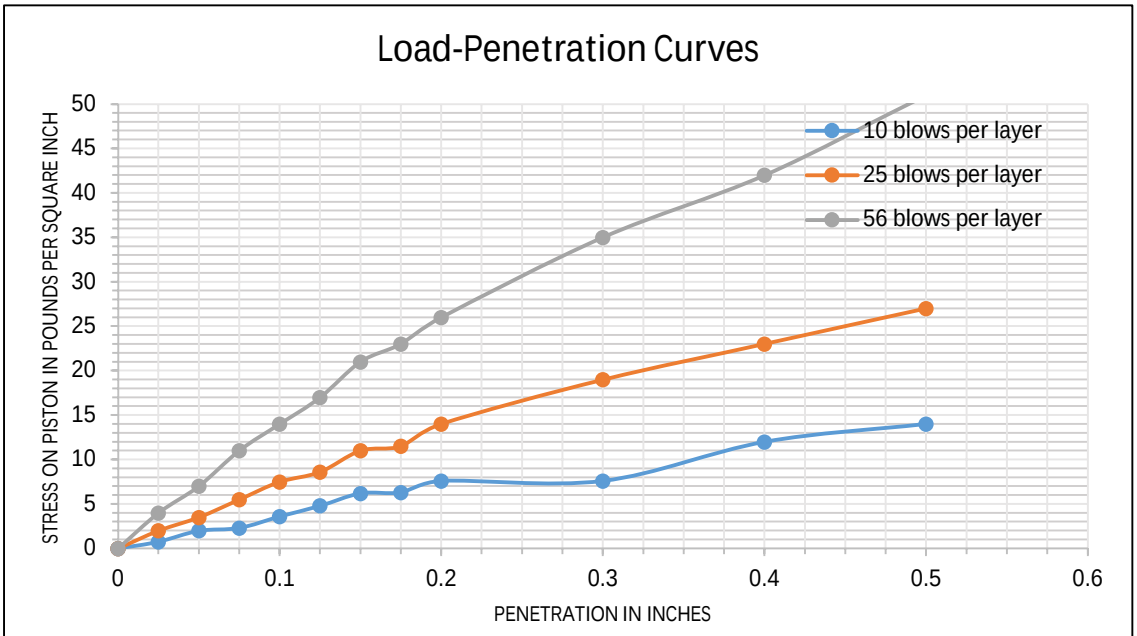
CBR (California Bearing Ratio) of Laboratory-Compacted Soils

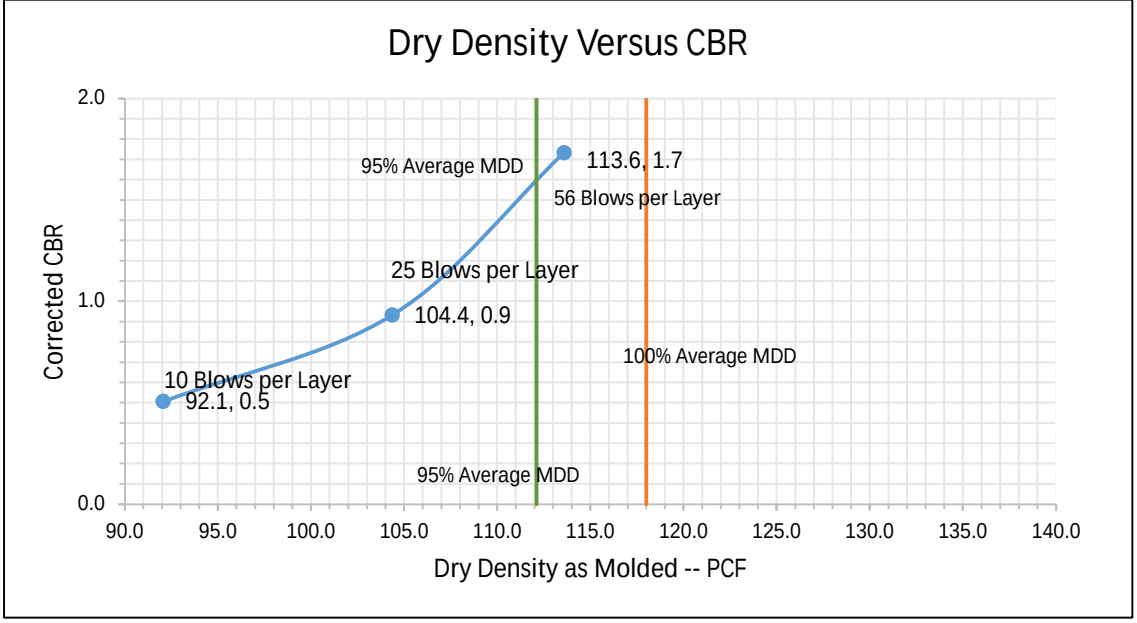
ASTM D1883

FIGURE B-15

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Fax: (661) 324-4218

Project Name:	Jasmine Solar Project	Sample Date:	12/7/2021
Project Number:	G20-268-10F	Test Date:	1/21/2021
Sample Location:	Combined B-22 & B-27 @ 0.0-5.0 feet BGS	Sampled by:	S. Jue
Sample Description:	ML: Sandy Silt w/ Clay: brown, moist, fine grained sand	Tested By:	ILTRemotigue





The CBR Test is based off of the compaction test method, ASTM D1557

At the Maximum Dry Density of ASTM D1557:	CBR @ MDD (118.0) =	1.9
At 95% of the Maximum Dry Density of ASTM D1557:	CBR @ 0.95*MDD (112.1) =	1.6

APPENDIX C

PILE LOAD TEST RESULTS

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-1
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	1 1/2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	12:52 PM
Temperature:	63 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.083
3	2000	0.086
4	3000	0.097
5	4000	0.118
6	3000	0.119
7	2000	0.115
8	1000	0.110
9	0	0.110

BSK ASSOCIATES

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-3
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	1"

Design Load:	n/a
Test Date:	11/23/2020
Time:	11:56 AM
Temperature:	59 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.116
3	2000	0.113
4	3000	0.112
5	4000	0.126
6	3000	0.118
7	2000	0.108
8	1000	0.101
9	0	0.090

BSK ASSOCIATES

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-5
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	1"

Design Load:	n/a
Test Date:	11/23/2020
Time:	9:59 AM
Temperature:	57 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.026
3	2000	0.098
4	3000	1.230
7	2000	1.230
8	1000	1.210
9	0	1.164

BSK ASSOCIATES

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-7
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	10:58 AM
Temperature:	59 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.011
3	2000	0.012
4	3000	0.017
5	4000	0.515
6	3000	0.061
7	2000	0.064
8	1000	0.063
9	0	0.049

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Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-9
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	10:57 AM
Temperature:	60 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.000
3	2000	0.000
4	3000	0.057
5	4000	0.420
6	4800	3.750
7	3000	3.500
8	2000	3.500
9	1000	3.500
10	0	3.250

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Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-11
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	2"

Design Load:	n/a
Test Date:	11/24/2020
Time:	9:02 AM
Temperature:	54 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.012
3	2000	0.130
4	3000	0.025
5	4000	0.945
6	5000	0.200
7	6000	0.360
8	7000	0.624
9	6000	0.621
10	5000	0.618
11	4000	0.615
12	3000	0.612
13	2000	0.609
14	1000	0.608
15	0	0.604

BSK ASSOCIATES

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-13
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	49 1/2"
Height of Jack Attachment:	49 1/2"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	2 1/2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	9:42 AM
Temperature:	54 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.000
3	2000	0.000
4	3000	0.000
5	4000	0.000
6	3000	0.000
7	2000	0.000
8	1000	0.000
9	0	0.000

BSK ASSOCIATES

Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-15
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	1 3/4"

Design Load:	n/a
Test Date:	11/23/2020
Time:	11:38 AM
Temperature:	65 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.005
3	2000	0.004
4	3000	0.018
5	4000	0.620
6	5000	0.132
7	6000	0.274
8	7000	0.420
9	6000	0.421
10	5000	0.418
11	4000	0.413
12	3000	0.409
13	2000	0.403
14	1000	0.398
15	0	0.393

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Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-17
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	1 1/2"

Design Load:	n/a
Test Date:	11/24/2020
Time:	8:13 AM
Temperature:	48 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.001
3	2000	0.006
4	3000	0.026
5	4000	0.078
6	3000	1.732
7	2000	1.731
8	1000	1.728
9	0	1.722

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Axial (Tension) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-19
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48 1/2"
Height of Jack Attachment:	48 1/2"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4"

Design Load:	n/a
Test Date:	11/23/2020
Time:	8:30 AM
Temperature:	48 F
Weather:	Clear
Performed By:	J. Leu

Step	Load (lbs)	Bottom of Pile Gauge Reading (inches)
1	0	0.000
2	1000	0.000
3	2000	0.000
4	3000	0.000
5	4000	0.057
6	3000	0.060
7	2000	0.058
8	1000	0.057
9	0	0.050

BSK ASSOCIATES

Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-2
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4"

Design Load:	n/a
Test Date:	11/23/2020
Time:	1:15 PM
Temperature:	63 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.692	0.000
2	1000	0.577	0.081
3	2000	0.802	0.182
4	3000	1.334	0.325
5	4000	1.977	0.515
6	5000	2.938	0.827
7	4000	2.672	0.806
8	3000	2.401	0.752
9	2000	2.102	0.675
10	1000	1.746	0.558
11	0	0.824	0.394

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Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-4
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4"

Design Load:	n/a
Test Date:	11/23/2020
Time:	1:15 PM
Temperature:	63 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.249	0.117
3	2000	0.799	0.297
4	3000	n/a	0.578
5	4000	2.907	1.118
6	5000	5.611	2.375
7	4000	5.481	2.250
8	3000	5.150	2.125
9	2000	4.657	2.018
10	1000	4.144	1.854
11	0	3.493	1.750

BSK ASSOCIATES

Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-6
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	50 3/4"
Height of Jack Attachment:	50 3/4"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	5 1/2"

Design Load:	n/a
Test Date:	11/24/2020
Time:	10:34 AM
Temperature:	60
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.280	0.101
3	2000	0.751	0.239
4	3000	1.335	0.418
5	4000	2.246	0.761
6	5000	4.420	1.710
7	4000	4.207	1.699
8	3000	3.837	1.614
9	2000	3.479	1.525
10	1000	3.053	1.399
11	0	2.325	1.195

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Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-8
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4 1/2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	11:26 AM
Temperature:	59 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.299	0.097
3	2000	1.297	0.260
4	3000	2.031	0.566
5	4000	3.448	1.220
6	4800	7.611	2.750
7	4000	7.611	2.625
8	3000	7.186	2.625
9	2000	6.736	2.625
10	1000	7.111	2.625
11	0	4.986	1.855

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Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-10
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4"

Design Load:	n/a
Test Date:	11/24/2020
Time:	11:20 AM
Temperature:	60 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.440	0.154
3	2000	0.853	0.289
4	3000	1.372	0.477
5	4000	1.961	0.693
6	5000	2.833	1.048
7	4000	2.576	0.989
8	3000	2.222	0.889
9	2000	1.740	0.753
10	1000	1.333	0.580
11	0	0.595	0.296

BSK ASSOCIATES

Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-12
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	3 1/2"

Design Load:	n/a
Test Date:	11/24/2020
Time:	9:33 AM
Temperature:	54 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.171	0.105
3	2000	0.603	0.241
4	3000	1.255	0.471
5	4000	2.254	0.855
6	5000	3.921	1.517
7	4000	3.711	1.481
8	3000	3.404	1.404
9	2000	2.934	1.295
10	1000	2.534	1.138
11	0	1.609	0.803

BSK ASSOCIATES

Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-14
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	49 1/2"
Height of Jack Attachment:	49 1/2"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	3 1/2"

Design Load:	n/a
Test Date:	11/23/2020
Time:	10:22 AM
Temperature:	54 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.519	0.171
3	2000	1.364	0.503
4	3000	2.901	1.197
5	4000	8.372	4.125
8	3000	12.997	5.250
9	2000	11.497	5.500
10	1000	11.247	4.750
11	0	8.622	4.000

BSK ASSOCIATES

Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-16
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48 3/4"
Height of Jack Attachment:	48 3/4"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4 3/4"

Design Load:	n/a
Test Date:	11/24/2020
Time:	12:09 PM
Temperature:	65 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.194	0.073
3	2000	0.530	0.183
4	3000	0.996	0.313
5	4000	1.559	0.470
6	5000	2.092	0.658
7	4000	4.429	1.279
8	3000	3.998	1.197
9	2000	3.779	1.095
10	1000	3.105	0.954
11	0	2.494	0.732

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Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-18
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48"
Height of Jack Attachment:	48"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	4"

Design Load:	n/a
Test Date:	11/24/2020
Time:	8:39 AM
Temperature:	48 F
Weather:	Sunny
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.179	0.091
3	2000	0.783	0.294
4	3000	1.780	0.660
5	4000	3.889	1.453
8	3000	3.602	1.403
9	2000	3.222	1.299
10	1000	2.562	1.146
11	0	1.803	0.800

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Lateral (Strong Axis) Pile Load Testing

BSK Project No.:	G2026810F
BSK Project Name:	Jasmine Solar Project
Project Location	NW corner Old River Rd & Copus Rd, Mettler, Kern County, CA

Pile Location Number:	PLT-20
Total Pile Length:	10'-0"
Pile Shape:	W6x9
Exposed Height of Pile:	48.5"
Height of Jack Attachment:	48.5"
Height of Top Pile Gauge:	N/A
Height of Bottom Pile Gauge:	3.25"

Design Load:	n/a
Test Date:	11/23/2020
Time:	8:45 AM
Temperature:	48 F
Weather:	Clear
Performed By:	J. Leu

Step	Load (lbs)	Top of Pile Gauge Reading (inches)	Bottom of Pile Gauge Reading (inches)
1	0	0.000	0.000
2	1000	0.292	0.625
3	2000	0.867	0.190
4	3000	1.273	0.328
5	4000	1.815	0.483
6	3000	2.339	0.674
7	2000	2.008	0.605
8	1000	1.609	0.510
9	0	0.430	0.172

BSK ASSOCIATES

APPENDIX D

THERMAL RESISTIVITY TEST RESULTS

Laboratory Report for

BSK Associates Engineers & Laboratories

G2026810F, Jasmine

January 26, 2021

Daniel B. Stephens & Associates, Inc.

4400 Alameda Blvd. NE, Suite C • Albuquerque, New Mexico 87113

January 26, 2021

On Man Lau
BSK Associates Engineers & Laboratories
550 W Locust Ave.
Fresno, CA 93650
(559) 497-2880 ext 206

Re: DBS&A Laboratory Report for the BSK Associates G2026810F, Jasmine Project

Dear Mr. On Man Lau:

Enclosed is the report for the BSK Associates G2026810F, Jasmine project sample testing. Please review this report and provide any comments as samples will be held for a maximum of 30 days. After 30 days samples will be returned or disposed of in an appropriate manner.

All testing results were evaluated subjectively for consistency and reasonableness, and the results appear to be reasonably representative of the material tested. However, DBS&A does not assume any responsibility for interpretations or analyses based on the data enclosed, nor can we guarantee that these data are fully representative of the undisturbed materials at the field site. We recommend that careful evaluation of these laboratory results be made for your particular application.

The testing utilized to generate the enclosed report employs methods that are standard for the industry. The results do not constitute a professional opinion by DBS&A, nor can the results affect any professional or expert opinions rendered with respect thereto by DBS&A. You have acknowledged that all the testing undertaken by us, and the report provided, constitutes mere test results using standardized methods, and cannot be used to disqualify DBS&A from rendering any professional or expert opinion, having waived any claim of conflict of interest by DBS&A.

We are pleased to provide this service to BSK Associates and look forward to future laboratory testing on other projects. If you have any questions about the enclosed data, please do not hesitate to call.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.
SOIL TESTING & RESEARCH LABORATORY

Joleen Hines
Laboratory Manager

Enclosure

Daniel B. Stephens & Associates, Inc.
Soil Testing & Research Laboratory
4400 Alameda Blvd. NE, Suite C
Albuquerque, NM 87113
505-889-7752
FAX 505-889-0258

Summaries

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1]			Saturated Hydraulic Conductivity[2]			Moisture Characteristics[3]								Particle Size[4]			Specific Gravity[5]		Air Perm-eability	Atterberg Limits	Thermal Properties
	G	VM	VD	CH	FH	FW	HC	PP	FP	DPP	RH	EP	WHC	K_{unsat}	DS	WS	H	F	C			
B-2 @ 5'	X	X																				X
B-8 @ 5'	X	X																				X
B-16 @ 5'	X	X																				X
B-20 @ 5'	X	X																				X
B-28 @ 6'	X	X																				X
B-29 @ 5'	X	X																				X

[1] G = Gravimetric Moisture Content, VM = Volume Measurement Method, VD = Volume Displacement Method

[2] CH = Constant Head Rigid Wall, FH = Falling Head Rigid Wall, FW = Falling Head Rising Tail Flexible Wall

[3] HC = Hanging Column, PP = Pressure Plate, FP = Filter Paper, DPP = Dew Point Potentiometer, RH = Relative Humidity Box, EP = Effective Porosity, WHC = Water Holding Capacity, Kunsat = Calculated Unsaturated Hydraulic Conductivity

[4] DS = Dry Sieve, WS = Wet Sieve, H = Hydrometer

[5] F = Fine (<4.75mm), C = Coarse (>4.75mm)

Notes

Sample Receipt:
Six samples, each as a 2.5" x 6" stainless steel sleeve sealed with end caps and tape, were received on January 7, 2021. The samples were delivered in a cardboard box with no packing material.

Sample Preparation and Testing Notes:
An intact sub-sample was obtained from each of the sleeves by extruding the sample material from the original sleeve into a similar size testing ring. Each sub-sample was then subjected to thermal properties testing at the initial moisture content, the saturated moisture content, and at the oven dry state. Each thermal properties reading was obtained in the same location if possible.

Summary of Thermal Properties

Sample	Reading	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Temp °C	K W/(m·K)	ρ °C·cm/W	C $MJ/(m^3·K)$	D mm^2/s
B-2 @ 5'	Initial	14.06	25.47	1.81	22.38	1.583	63.2	2.841	0.557
B-2 @ 5'	Saturated	19.56	35.42	1.81	19.30	1.678	59.6	3.209	0.523
B-2 @ 5'	Oven Dry	0.00	0.00	1.81	22.39	0.388	258.0	1.633	0.237
B-8 @ 5'	Initial	11.67	21.25	1.82	21.90	1.514	66.1	2.973	0.509
B-8 @ 5'	Saturated	18.92	34.47	1.82	19.17	1.671	59.8	3.187	0.524
B-8 @ 5'	Oven Dry	0.00	0.00	1.82	22.55	0.448	223.5	1.635	0.274
B-16 @ 5'	Initial	7.51	10.51	1.40	21.88	0.651	153.5	2.206	0.295
B-16 @ 5'	Saturated	35.06	49.06	1.40	19.46	1.141	87.6	3.722	0.307
B-16 @ 5'	Oven Dry	0.00	0.00	1.40	22.59	0.261	382.6	1.412	0.185
B-20 @ 5'	Initial	18.53	30.51	1.65	21.59	1.008	99.2	2.336	0.432
B-20 @ 5'	Saturated	25.73	42.36	1.65	19.45	1.450	69.0	3.858	0.376
B-20 @ 5'	Oven Dry	0.00	0.00	1.65	23.04	0.207	483.9	1.214	0.170
B-28 @ 6'	Initial	11.25	20.55	1.83	22.70	1.501	66.6	2.862	0.524
B-28 @ 6'	Saturated	17.73	32.39	1.83	18.78	1.737	57.6	3.189	0.545
B-28 @ 6'	Oven Dry	0.00	0.00	1.83	22.52	0.347	288.6	1.417	0.245
B-29 @ 5'	Initial	15.85	28.35	1.79	22.78	1.499	66.7	3.340	0.449
B-29 @ 5'	Saturated	20.13	36.00	1.79	19.36	1.520	65.8	3.160	0.481
B-29 @ 5'	Oven Dry	0.00	0.00	1.79	23.32	0.330	303.4	1.713	0.192

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties

Summary of Thermal Properties

Sample	Reading	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Temp °C	K W/(m·K)	ρ °C·cm/W	C $MJ/(m^3·K)$	D mm^2/s
B-2 @ 5'	Initial	14.06	25.47	1.81	22.38	1.583	63.2	2.841	0.557
B-2 @ 5'	Saturated	19.56	35.42	1.81	19.30	1.678	59.6	3.209	0.523
B-2 @ 5'	Oven Dry	0.00	0.00	1.81	22.39	0.388	258.0	1.633	0.237
B-8 @ 5'	Initial	11.67	21.25	1.82	21.90	1.514	66.1	2.973	0.509
B-8 @ 5'	Saturated	18.92	34.47	1.82	19.17	1.671	59.8	3.187	0.524
B-8 @ 5'	Oven Dry	0.00	0.00	1.82	22.55	0.448	223.5	1.635	0.274
B-16 @ 5'	Initial	7.51	10.51	1.40	21.88	0.651	153.5	2.206	0.295
B-16 @ 5'	Saturated	35.06	49.06	1.40	19.46	1.141	87.6	3.722	0.307
B-16 @ 5'	Oven Dry	0.00	0.00	1.40	22.59	0.261	382.6	1.412	0.185
B-20 @ 5'	Initial	18.53	30.51	1.65	21.59	1.008	99.2	2.336	0.432
B-20 @ 5'	Saturated	25.73	42.36	1.65	19.45	1.450	69.0	3.858	0.376
B-20 @ 5'	Oven Dry	0.00	0.00	1.65	23.04	0.207	483.9	1.214	0.170
B-28 @ 6'	Initial	11.25	20.55	1.83	22.70	1.501	66.6	2.862	0.524
B-28 @ 6'	Saturated	17.73	32.39	1.83	18.78	1.737	57.6	3.189	0.545
B-28 @ 6'	Oven Dry	0.00	0.00	1.83	22.52	0.347	288.6	1.417	0.245
B-29 @ 5'	Initial	15.85	28.35	1.79	22.78	1.499	66.7	3.340	0.449
B-29 @ 5'	Saturated	20.13	36.00	1.79	19.36	1.520	65.8	3.160	0.481
B-29 @ 5'	Oven Dry	0.00	0.00	1.79	23.32	0.330	303.4	1.713	0.192

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Results Sheet for Sample: B-2 @ 5'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-2 @ 5'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	14.06	25.47	1.81	22.38	1.583	63.2	2.841	0.557
Saturated	0	19.56	35.42	1.81	19.30	1.678	59.6	3.209	0.523
Oven Dry	---	0.00	0.00	1.81	22.39	0.388	258.0	1.633	0.237

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

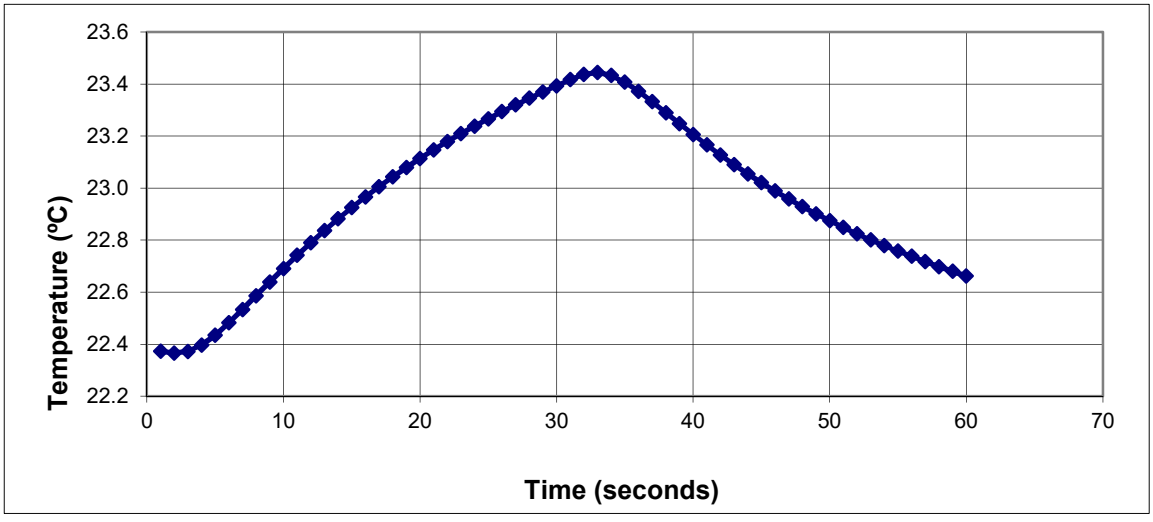
Sample Number: B-2 @ 5'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 12:35 PM	*K (W/(m·K)):*	1.583
Sensor:	SH-1	*ρ (°C·cm/W):*	63.2
Test Temp.(°C):	22.4	*C (MJ/(m³·K)):*	2.841
KD2 Pro Sample ID:	B-2J-AR	*D (mm²/s):*	0.557
Power (W/m):	25.000	*Err:*	0.0089
Current (amps):	0.155		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.373	16	22.966	31	23.417	46	22.989
2	22.366	17	23.005	32	23.437	47	22.958
3	22.372	18	23.043	33	23.445	48	22.929
4	22.397	19	23.079	34	23.433	49	22.901
5	22.434	20	23.114	35	23.407	50	22.875
6	22.482	21	23.147	36	23.372	51	22.849
7	22.533	22	23.179	37	23.332	52	22.824
8	22.586	23	23.210	38	23.290	53	22.801
9	22.639	24	23.238	39	23.248	54	22.779
10	22.691	25	23.266	40	23.206	55	22.758
11	22.742	26	23.294	41	23.166	56	22.738
12	22.790	27	23.320	42	23.127	57	22.717
13	22.837	28	23.346	43	23.090	58	22.698
14	22.882	29	23.370	44	23.055	59	22.680
15	22.925	30	23.393	45	23.021	60	22.662

B-2 @ 5', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

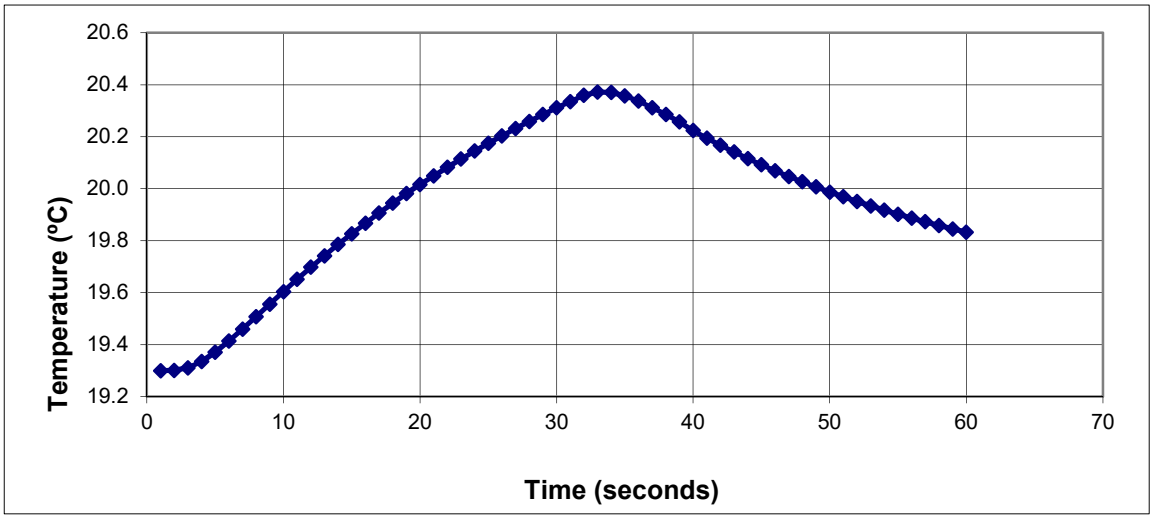
Sample Number: B-2 @ 5'
Potential (-cm water): 0

Test Date/Time:	1/15/21 2:58 PM	*K (W/(m·K)):*	1.678
Sensor:	SH-1	*ρ (°C·cm/W):*	59.6
Test Temp.(°C):	19.3	*C (MJ/(m³·K)):*	3.209
KD2 Pro Sample ID:	B-2J-SA	*D (mm²/s):*	0.523
Power (W/m):	24.040	*Err:*	0.0041
Current (amps):	0.152		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	19.300	16	19.867	31	20.335	46	20.069
2	19.301	17	19.907	32	20.359	47	20.047
3	19.311	18	19.944	33	20.372	48	20.027
4	19.335	19	19.981	34	20.370	49	20.007
5	19.371	20	20.016	35	20.357	50	19.987
6	19.414	21	20.049	36	20.337	51	19.969
7	19.460	22	20.083	37	20.312	52	19.951
8	19.508	23	20.114	38	20.286	53	19.934
9	19.556	24	20.145	39	20.257	54	19.917
10	19.604	25	20.175	40	20.224	55	19.902
11	19.652	26	20.203	41	20.194	56	19.887
12	19.698	27	20.232	42	20.168	57	19.873
13	19.742	28	20.259	43	20.141	58	19.859
14	19.786	29	20.285	44	20.116	59	19.845
15	19.827	30	20.311	45	20.092	60	19.833

B-2 @ 5', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

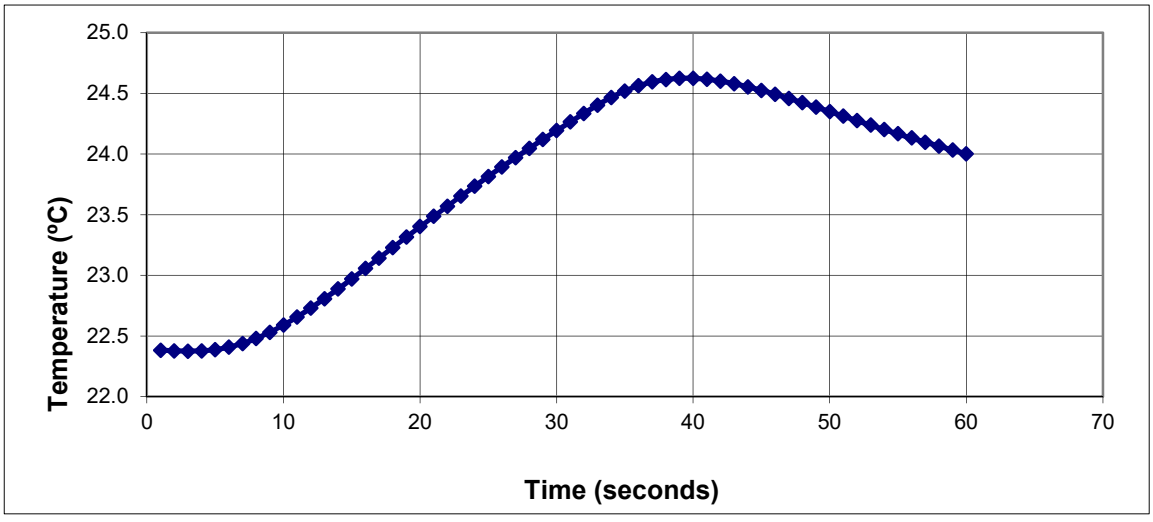
Sample Number: B-2 @ 5'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:30 PM	*K (W/(m·K)):*	0.388
Sensor:	SH-1	*ρ (°C·cm/W):*	258.0
Test Temp.(°C):	22.4	*C (MJ/(m³·K)):*	1.633
KD2 Pro Sample ID:	B-2J-OD	*D (mm²/s):*	0.237
Power (W/m):	23.320	*Err:*	0.0019
Current (amps):	0.150		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.383	16	23.057	31	24.265	46	24.493
2	22.378	17	23.143	32	24.335	47	24.459
3	22.375	18	23.229	33	24.403	48	24.423
4	22.377	19	23.315	34	24.466	49	24.387
5	22.387	20	23.402	35	24.519	50	24.350
6	22.408	21	23.487	36	24.563	51	24.313
7	22.438	22	23.570	37	24.594	52	24.276
8	22.479	23	23.654	38	24.615	53	24.239
9	22.530	24	23.735	39	24.624	54	24.202
10	22.590	25	23.815	40	24.625	55	24.167
11	22.657	26	23.894	41	24.616	56	24.133
12	22.730	27	23.971	42	24.601	57	24.098
13	22.807	28	24.046	43	24.580	58	24.066
14	22.888	29	24.121	44	24.554	59	24.033
15	22.971	30	24.193	45	24.525	60	24.002

B-2 @ 5', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Results Sheet for Sample: B-8 @ 5'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-8 @ 5'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	11.67	21.25	1.82	21.90	1.514	66.1	2.973	0.509
Saturated	0	18.92	34.47	1.82	19.17	1.671	59.8	3.187	0.524
Oven Dry	---	0.00	0.00	1.82	22.55	0.448	223.5	1.635	0.274

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

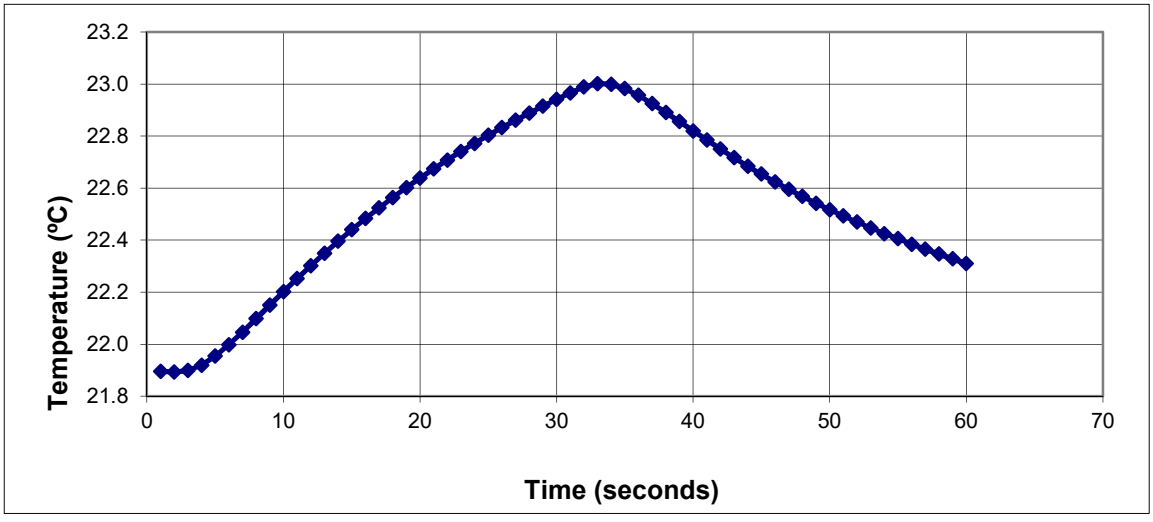
Sample Number: B-8 @ 5'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 12:44 PM	*K (W/(m·K)):*	1.514
Sensor:	SH-1	*ρ (°C·cm/W):*	66.1
Test Temp.(°C):	21.9	*C (MJ/(m³·K)):*	2.973
KD2 Pro Sample ID:	B-8J-AR	*D (mm²/s):*	0.509
Power (W/m):	25.070	*Err:*	0.0050
Current (amps):	0.155		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	21.896	16	22.483	31	22.966	46	22.624
2	21.893	17	22.524	32	22.989	47	22.595
3	21.899	18	22.564	33	23.002	48	22.568
4	21.919	19	22.602	34	22.999	49	22.542
5	21.954	20	22.638	35	22.983	50	22.517
6	21.998	21	22.674	36	22.957	51	22.493
7	22.046	22	22.708	37	22.925	52	22.470
8	22.098	23	22.741	38	22.891	53	22.447
9	22.150	24	22.772	39	22.856	54	22.425
10	22.202	25	22.804	40	22.820	55	22.406
11	22.252	26	22.833	41	22.785	56	22.384
12	22.302	27	22.861	42	22.750	57	22.365
13	22.349	28	22.888	43	22.717	58	22.347
14	22.396	29	22.915	44	22.684	59	22.328
15	22.440	30	22.941	45	22.654	60	22.310

B-8 @ 5', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

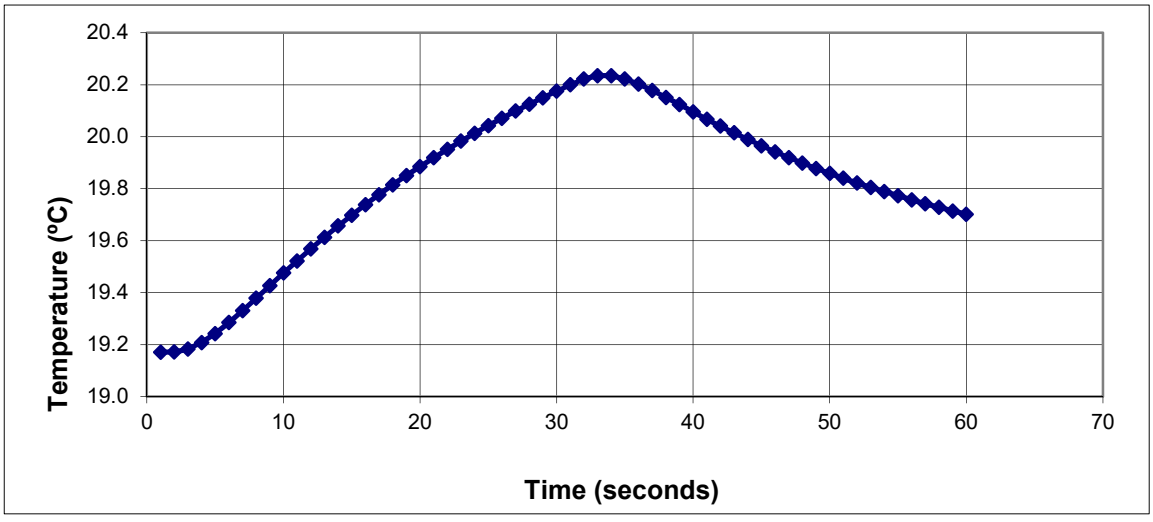
Sample Number: B-8 @ 5'
Potential (-cm water): 0

Test Date/Time:	1/15/21 3:05 PM	*K (W/(m·K)):*	1.671
Sensor:	SH-1	*ρ (°C·cm/W):*	59.8
Test Temp.(°C):	19.2	*C (MJ/(m³·K)):*	3.187
KD2 Pro Sample ID:	B-8J-SA	*D (mm²/s):*	0.524
Power (W/m):	23.740	*Err:*	0.0037
Current (amps):	0.151		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	19.171	16	19.739	31	20.200	46	19.942
2	19.172	17	19.777	32	20.222	47	19.920
3	19.183	18	19.815	33	20.235	48	19.899
4	19.208	19	19.851	34	20.235	49	19.878
5	19.243	20	19.885	35	20.222	50	19.859
6	19.285	21	19.919	36	20.202	51	19.840
7	19.331	22	19.951	37	20.178	52	19.822
8	19.379	23	19.983	38	20.151	53	19.805
9	19.427	24	20.013	39	20.124	54	19.789
10	19.476	25	20.043	40	20.096	55	19.773
11	19.522	26	20.071	41	20.067	56	19.757
12	19.569	27	20.099	42	20.041	57	19.742
13	19.613	28	20.125	43	20.015	58	19.729
14	19.657	29	20.150	44	19.990	59	19.714
15	19.698	30	20.175	45	19.965	60	19.702

B-8 @ 5', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

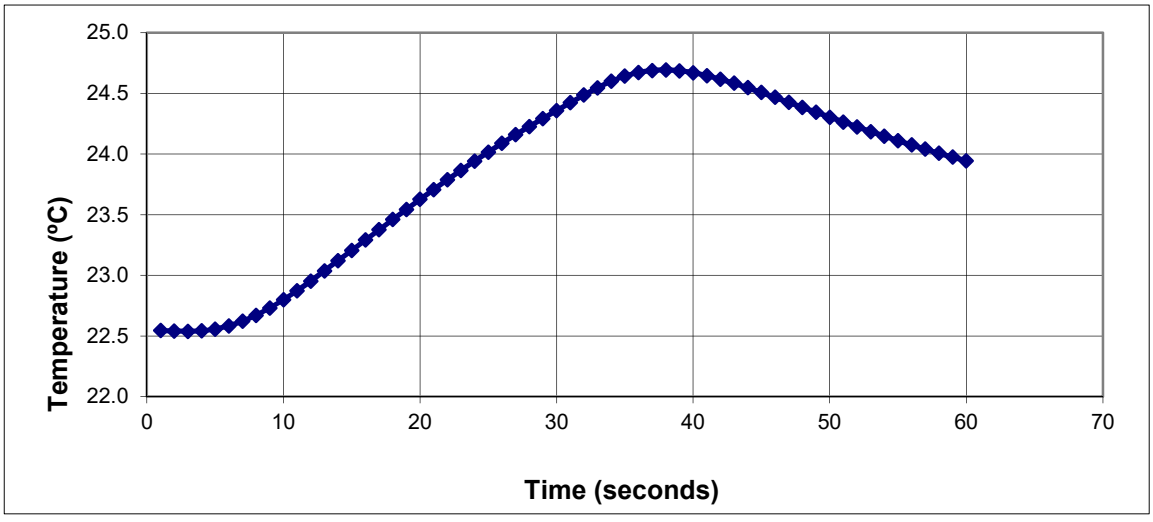
Sample Number: B-8 @ 5'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:51 PM	*K (W/(m·K)):*	0.448
Sensor:	SH-1	*ρ (°C·cm/W):*	223.5
Test Temp.(°C):	22.6	*C (MJ/(m³·K)):*	1.635
KD2 Pro Sample ID:	B-8J-OD	*D (mm²/s):*	0.274
Power (W/m):	23.020	*Err:*	0.0027
Current (amps):	0.149		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.545	16	23.292	31	24.423	46	24.468
2	22.541	17	23.376	32	24.486	47	24.426
3	22.539	18	23.460	33	24.546	48	24.385
4	22.543	19	23.543	34	24.600	49	24.344
5	22.557	20	23.626	35	24.642	50	24.303
6	22.583	21	23.707	36	24.672	51	24.263
7	22.621	22	23.787	37	24.688	52	24.224
8	22.671	23	23.865	38	24.693	53	24.185
9	22.731	24	23.942	39	24.686	54	24.147
10	22.799	25	24.016	40	24.670	55	24.110
11	22.874	26	24.089	41	24.646	56	24.075
12	22.953	27	24.159	42	24.617	57	24.041
13	23.037	28	24.227	43	24.584	58	24.007
14	23.121	29	24.293	44	24.547	59	23.975
15	23.206	30	24.359	45	24.508	60	23.944

B-8 @ 5', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Results Sheet for Sample: B-16 @ 5'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-16 @ 5'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	7.51	10.51	1.40	21.88	0.651	153.5	2.206	0.295
Saturated	0	35.06	49.06	1.40	19.46	1.141	87.6	3.722	0.307
Oven Dry	---	0.00	0.00	1.40	22.59	0.261	382.6	1.412	0.185

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

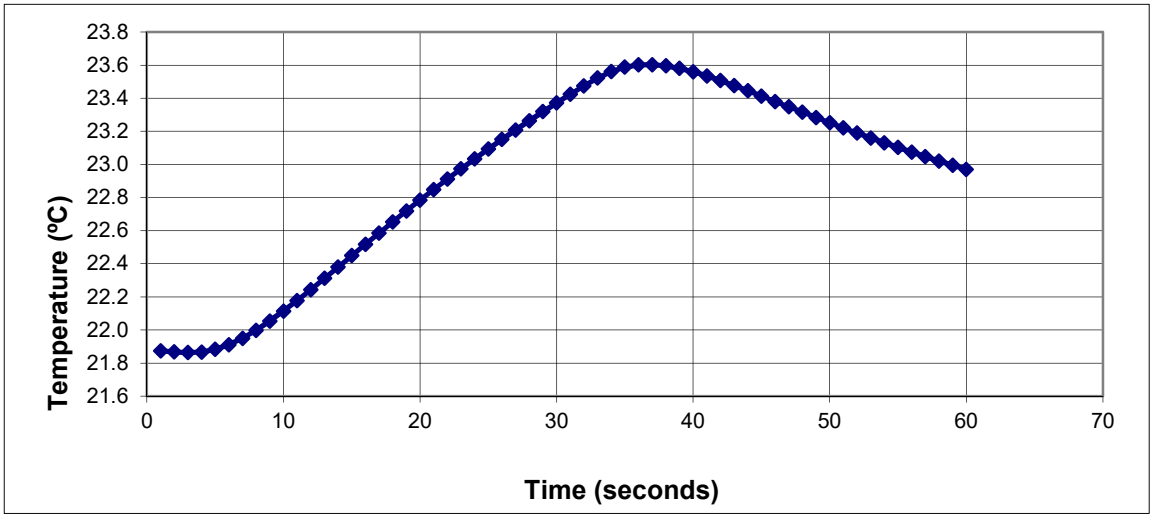
Sample Number: B-16 @ 5'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 12:51 PM	*K (W/(m·K)):*	0.651
Sensor:	SH-1	*ρ (°C·cm/W):*	153.5
Test Temp.(°C):	21.9	*C (MJ/(m³·K)):*	2.206
KD2 Pro Sample ID:	B-16J-AR	*D (mm²/s):*	0.295
Power (W/m):	24.850	*Err:*	0.0024
Current (amps):	0.155		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	21.874	16	22.518	31	23.424	46	23.380
2	21.868	17	22.585	32	23.475	47	23.348
3	21.864	18	22.653	33	23.522	48	23.316
4	21.867	19	22.719	34	23.561	49	23.284
5	21.883	20	22.785	35	23.588	50	23.252
6	21.911	21	22.849	36	23.602	51	23.221
7	21.950	22	22.911	37	23.603	52	23.190
8	21.998	23	22.973	38	23.596	53	23.160
9	22.054	24	23.034	39	23.580	54	23.131
10	22.114	25	23.093	40	23.560	55	23.103
11	22.178	26	23.151	41	23.535	56	23.075
12	22.244	27	23.208	42	23.507	57	23.048
13	22.312	28	23.264	43	23.476	58	23.021
14	22.380	29	23.319	44	23.446	59	22.996
15	22.449	30	23.372	45	23.413	60	22.970

B-16 @ 5', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

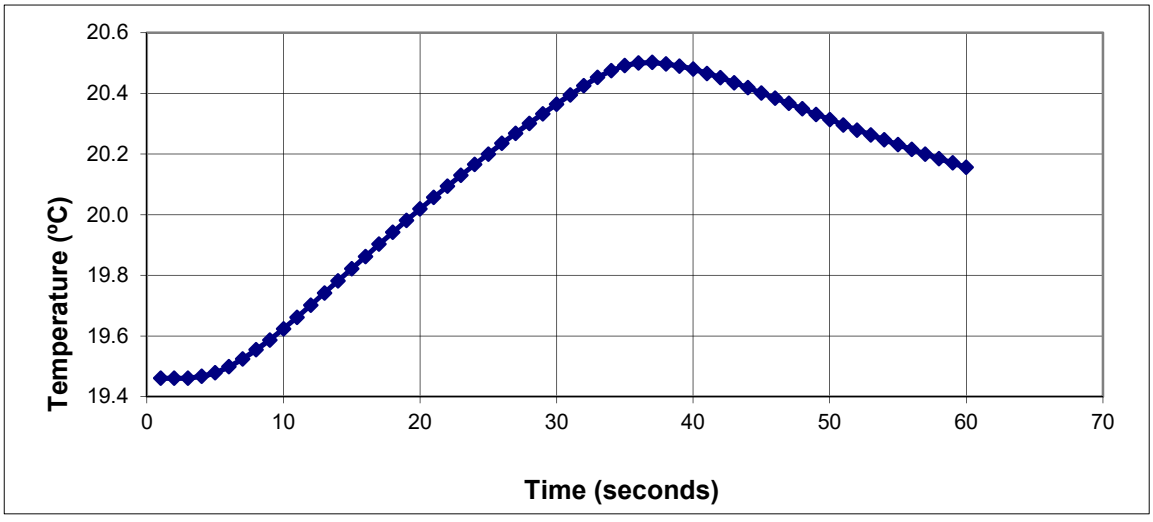
Sample Number: B-16 @ 5'
Potential (-cm water): 0

Test Date/Time:	1/15/21 3:13 PM	*K (W/(m·K)):*	1.141
Sensor:	SH-1	*ρ (°C·cm/W):*	87.6
Test Temp.(°C):	19.5	*C (MJ/(m³·K)):*	3.722
KD2 Pro Sample ID:	B-16J-SA	*D (mm²/s):*	0.307
Power (W/m):	23.910	*Err:*	0.0013
Current (amps):	0.152		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	19.461	16	19.862	31	20.395	46	20.384
2	19.461	17	19.903	32	20.425	47	20.367
3	19.461	18	19.942	33	20.453	48	20.349
4	19.467	19	19.981	34	20.475	49	20.331
5	19.479	20	20.019	35	20.492	50	20.314
6	19.499	21	20.057	36	20.500	51	20.296
7	19.524	22	20.094	37	20.502	52	20.279
8	19.555	23	20.130	38	20.497	53	20.263
9	19.587	24	20.166	39	20.490	54	20.247
10	19.624	25	20.200	40	20.480	55	20.231
11	19.662	26	20.235	41	20.466	56	20.215
12	19.702	27	20.268	42	20.452	57	20.200
13	19.742	28	20.301	43	20.435	58	20.185
14	19.782	29	20.333	44	20.419	59	20.171
15	19.822	30	20.364	45	20.401	60	20.156

B-16 @ 5', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

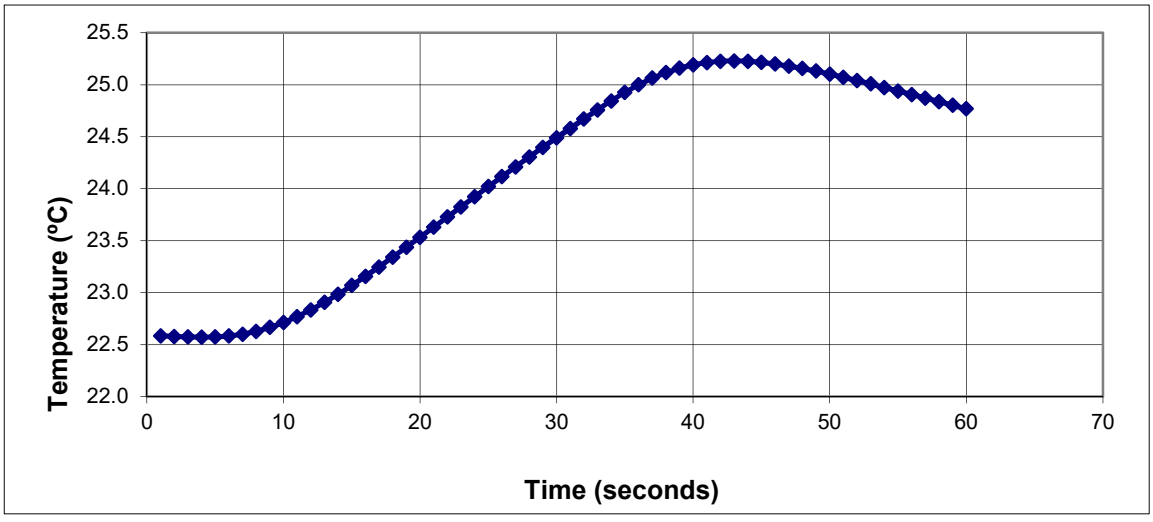
Sample Number: B-16 @ 5'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:36 PM	*K (W/(m·K)):*	0.261
Sensor:	SH-1	*ρ (°C·cm/W):*	382.6
Test Temp.(°C):	22.6	*C (MJ/(m³·K)):*	1.412
KD2 Pro Sample ID:	B-16J-OD	*D (mm²/s):*	0.185
Power (W/m):	23.250	*Err:*	0.0014
Current (amps):	0.150		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.585	16	23.157	31	24.580	46	25.200
2	22.579	17	23.247	32	24.670	47	25.180
3	22.575	18	23.342	33	24.758	48	25.157
4	22.573	19	23.436	34	24.844	49	25.131
5	22.575	20	23.533	35	24.925	50	25.102
6	22.584	21	23.630	36	25.000	51	25.072
7	22.601	22	23.728	37	25.064	52	25.040
8	22.629	23	23.826	38	25.117	53	25.008
9	22.666	24	23.923	39	25.160	54	24.973
10	22.713	25	24.020	40	25.192	55	24.939
11	22.770	26	24.116	41	25.212	56	24.905
12	22.835	27	24.210	42	25.225	57	24.871
13	22.907	28	24.304	43	25.229	58	24.837
14	22.986	29	24.397	44	25.225	59	24.802
15	23.070	30	24.490	45	25.215	60	24.768

B-16 @ 5', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Results Sheet for Sample: B-20 @ 5'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-20 @ 5'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	18.53	30.51	1.65	21.59	1.008	99.2	2.336	0.432
Saturated	0	25.73	42.36	1.65	19.45	1.450	69.0	3.858	0.376
Oven Dry	---	0.00	0.00	1.65	23.04	0.207	483.9	1.214	0.170

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

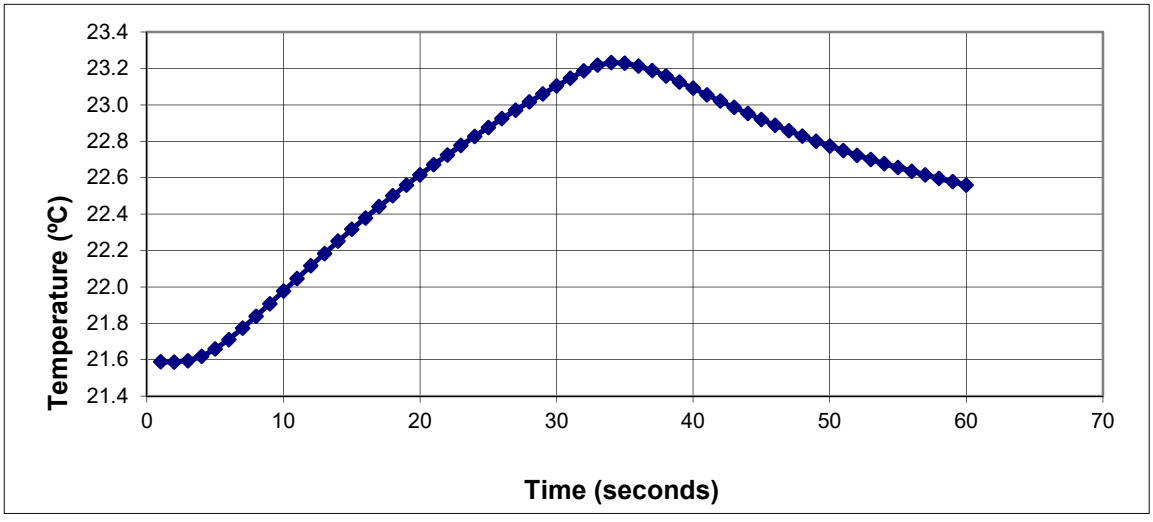
Sample Number: B-20 @ 5'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 1:02 PM	*K (W/(m·K)):*	1.008
Sensor:	SH-1	*ρ (°C·cm/W):*	99.2
Test Temp.(°C):	21.6	*C (MJ/(m³·K)):*	2.336
KD2 Pro Sample ID:	B-20J-AR	*D (mm²/s):*	0.432
Power (W/m):	24.710	*Err:*	0.0042
Current (amps):	0.154		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	21.589	16	22.379	31	23.146	46	22.888
2	21.588	17	22.442	32	23.187	47	22.858
3	21.595	18	22.501	33	23.218	48	22.829
4	21.619	19	22.560	34	23.232	49	22.800
5	21.659	20	22.616	35	23.229	50	22.774
6	21.711	21	22.671	36	23.213	51	22.749
7	21.773	22	22.724	37	23.189	52	22.723
8	21.839	23	22.777	38	23.159	53	22.700
9	21.908	24	22.827	39	23.126	54	22.677
10	21.977	25	22.876	40	23.091	55	22.656
11	22.047	26	22.924	41	23.055	56	22.635
12	22.116	27	22.970	42	23.021	57	22.616
13	22.184	28	23.017	43	22.986	58	22.596
14	22.251	29	23.061	44	22.953	59	22.578
15	22.316	30	23.104	45	22.919	60	22.560

B-20 @ 5', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

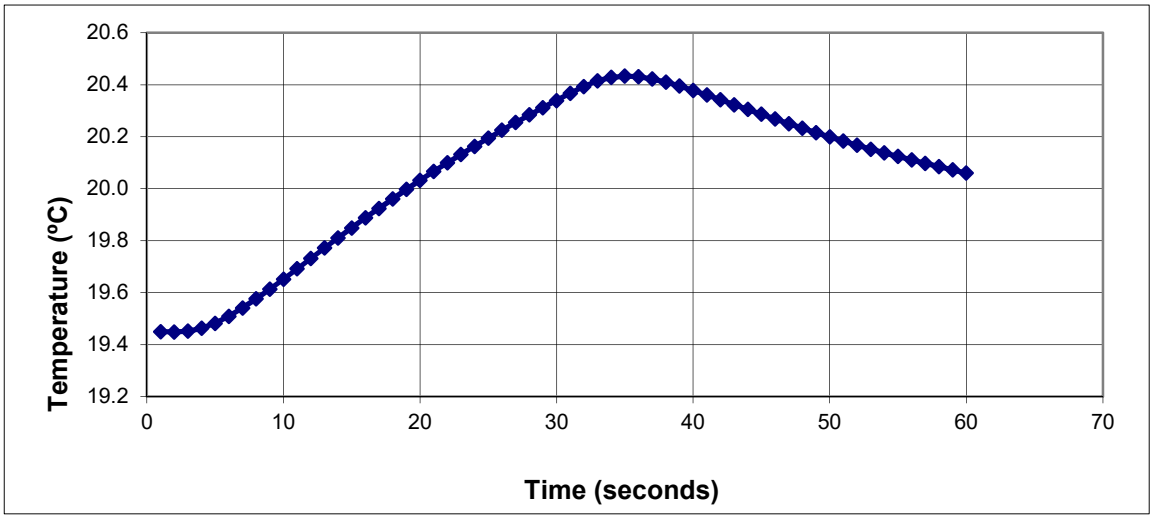
Sample Number: B-20 @ 5'
Potential (-cm water): 0

Test Date/Time:	1/15/21 3:22 PM	*K (W/(m·K)):*	1.450
Sensor:	SH-1	*ρ (°C·cm/W):*	69.0
Test Temp.(°C):	19.5	*C (MJ/(m³·K)):*	3.858
KD2 Pro Sample ID:	B-20J-SA	*D (mm²/s):*	0.376
Power (W/m):	23.840	*Err:*	0.0014
Current (amps):	0.151		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	19.450	16	19.888	31	20.367	46	20.268
2	19.449	17	19.924	32	20.393	47	20.250
3	19.452	18	19.961	33	20.415	48	20.233
4	19.463	19	19.997	34	20.428	49	20.216
5	19.482	20	20.032	35	20.433	50	20.199
6	19.509	21	20.066	36	20.431	51	20.183
7	19.541	22	20.100	37	20.422	52	20.168
8	19.576	23	20.132	38	20.410	53	20.152
9	19.613	24	20.163	39	20.395	54	20.138
10	19.652	25	20.195	40	20.378	55	20.124
11	19.692	26	20.225	41	20.361	56	20.111
12	19.732	27	20.255	42	20.342	57	20.097
13	19.772	28	20.284	43	20.323	58	20.085
14	19.811	29	20.312	44	20.305	59	20.072
15	19.849	30	20.339	45	20.287	60	20.060

B-20 @ 5', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

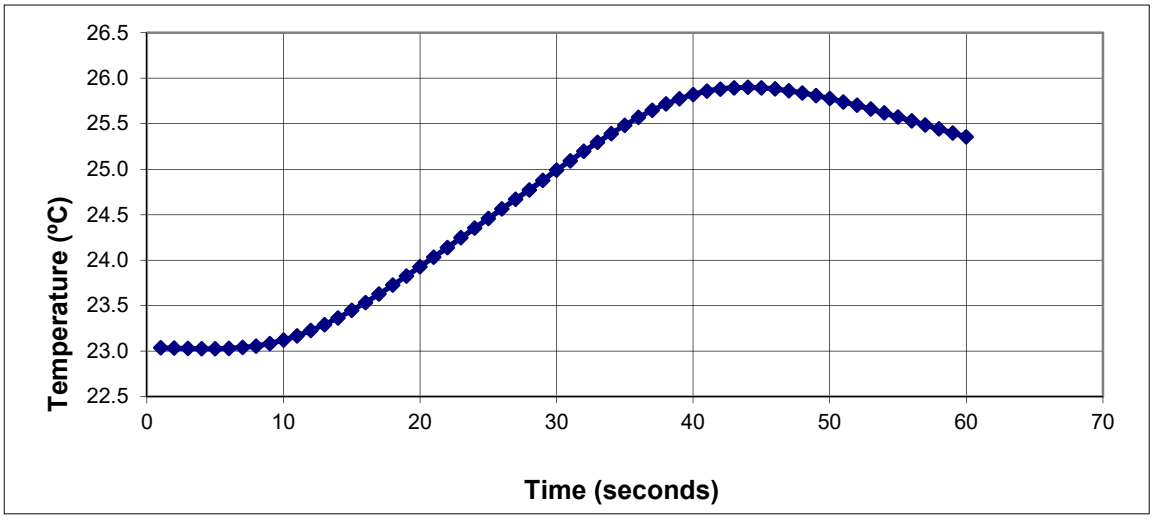
Sample Number: B-20 @ 5'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:47 PM	*K (W/(m·K)):*	0.207
Sensor:	SH-1	*ρ (°C·cm/W):*	483.9
Test Temp.(°C):	23.0	*C (MJ/(m³·K)):*	1.214
KD2 Pro Sample ID:	B-20J-OD	*D (mm²/s):*	0.170
Power (W/m):	23.100	*Err:*	0.0030
Current (amps):	0.149		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	23.037	16	23.535	31	25.093	46	25.882
2	23.033	17	23.628	32	25.196	47	25.863
3	23.030	18	23.726	33	25.295	48	25.838
4	23.028	19	23.825	34	25.392	49	25.810
5	23.027	20	23.928	35	25.483	50	25.776
6	23.031	21	24.033	36	25.569	51	25.740
7	23.040	22	24.138	37	25.648	52	25.702
8	23.057	23	24.246	38	25.716	53	25.661
9	23.085	24	24.352	39	25.775	54	25.619
10	23.122	25	24.458	40	25.821	55	25.575
11	23.169	26	24.564	41	25.857	56	25.531
12	23.226	27	24.669	42	25.881	57	25.487
13	23.292	28	24.773	43	25.895	58	25.443
14	23.366	29	24.878	44	25.899	59	25.399
15	23.448	30	24.988	45	25.894	60	25.354

B-20 @ 5', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Results Sheet for Sample: B-28 @ 6'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-28 @ 6'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	11.25	20.55	1.83	22.70	1.501	66.6	2.862	0.524
Saturated	0	17.73	32.39	1.83	18.78	1.737	57.6	3.189	0.545
Oven Dry	---	0.00	0.00	1.83	22.52	0.347	288.6	1.417	0.245

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

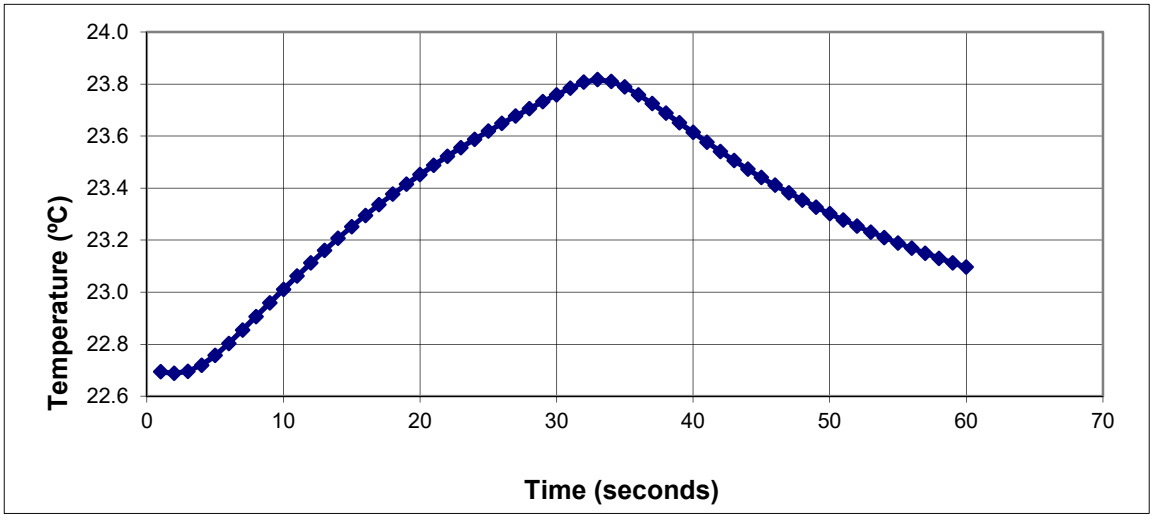
Sample Number: B-28 @ 6'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 1:09 PM	*K (W/(m·K)):*	1.501
Sensor:	SH-1	*ρ (°C·cm/W):*	66.6
Test Temp.(°C):	22.7	*C (MJ/(m³·K)):*	2.862
KD2 Pro Sample ID:	B-28J-AR	*D (mm²/s):*	0.524
Power (W/m):	24.770	*Err:*	0.0062
Current (amps):	0.154		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.694	16	23.295	31	23.784	46	23.411
2	22.688	17	23.337	32	23.807	47	23.382
3	22.696	18	23.377	33	23.817	48	23.354
4	22.719	19	23.415	34	23.810	49	23.327
5	22.757	20	23.452	35	23.789	50	23.302
6	22.803	21	23.488	36	23.759	51	23.278
7	22.854	22	23.522	37	23.725	52	23.254
8	22.906	23	23.556	38	23.688	53	23.231
9	22.959	24	23.588	39	23.651	54	23.210
10	23.011	25	23.619	40	23.614	55	23.189
11	23.062	26	23.649	41	23.576	56	23.169
12	23.112	27	23.677	42	23.541	57	23.150
13	23.160	28	23.705	43	23.506	58	23.130
14	23.207	29	23.732	44	23.473	59	23.113
15	23.252	30	23.759	45	23.441	60	23.096

B-28 @ 6', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

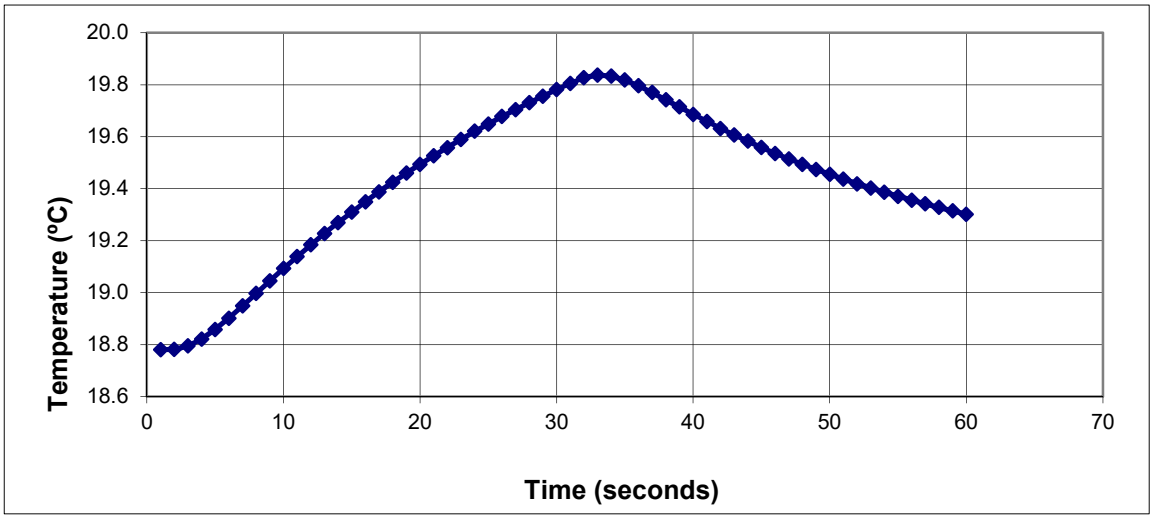
Sample Number: B-28 @ 6'
Potential (-cm water): 0

Test Date/Time:	1/15/21 3:29 PM	*K (W/(m·K)):*	1.737
Sensor:	SH-1	*ρ (°C·cm/W):*	57.6
Test Temp.(°C):	18.8	*C (MJ/(m³·K)):*	3.189
KD2 Pro Sample ID:	B-28J-SA	*D (mm²/s):*	0.545
Power (W/m):	23.660	*Err:*	0.0028
Current (amps):	0.151		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	18.781	16	19.350	31	19.805	46	19.536
2	18.782	17	19.388	32	19.827	47	19.515
3	18.795	18	19.425	33	19.837	48	19.494
4	18.821	19	19.460	34	19.833	49	19.474
5	18.859	20	19.494	35	19.818	50	19.455
6	18.902	21	19.527	36	19.796	51	19.437
7	18.949	22	19.558	37	19.770	52	19.419
8	18.997	23	19.589	38	19.742	53	19.403
9	19.045	24	19.621	39	19.715	54	19.387
10	19.093	25	19.649	40	19.686	55	19.371
11	19.139	26	19.678	41	19.659	56	19.356
12	19.184	27	19.704	42	19.632	57	19.342
13	19.228	28	19.731	43	19.607	58	19.328
14	19.270	29	19.756	44	19.583	59	19.315
15	19.310	30	19.781	45	19.559	60	19.302

B-28 @ 6', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

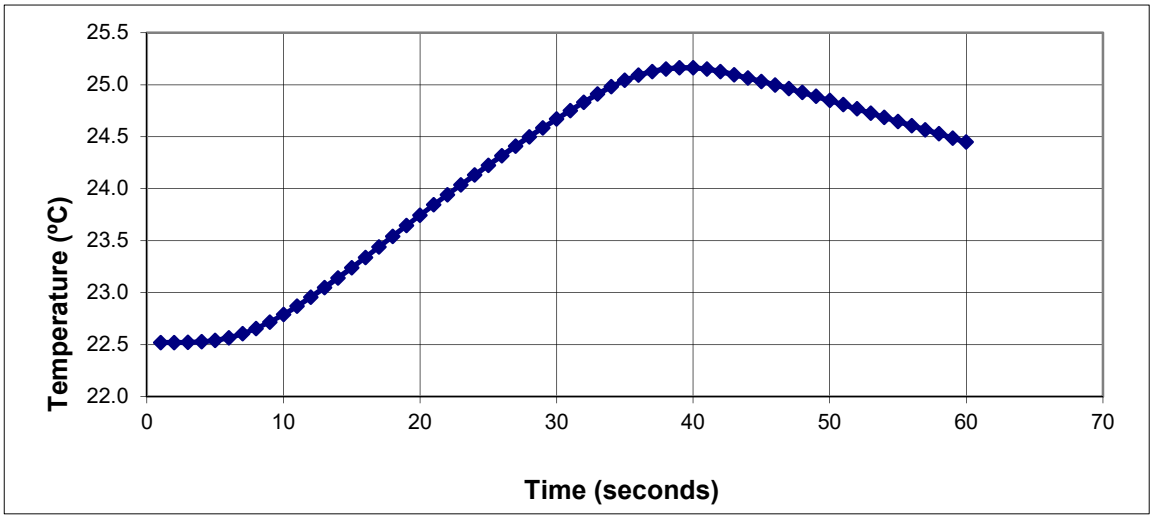
Sample Number: B-28 @ 6'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:43 PM	*K (W/(m·K)):*	0.347
Sensor:	SH-1	*ρ (°C·cm/W):*	288.6
Test Temp.(°C):	22.5	*C (MJ/(m³·K)):*	1.417
KD2 Pro Sample ID:	B-28J-OD	*D (mm²/s):*	0.245
Power (W/m):	23.190	*Err:*	0.0022
Current (amps):	0.149		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.521	16	23.339	31	24.752	46	24.998
2	22.521	17	23.440	32	24.832	47	24.963
3	22.522	18	23.542	33	24.910	48	24.925
4	22.528	19	23.645	34	24.981	49	24.888
5	22.541	20	23.745	35	25.043	50	24.848
6	22.567	21	23.845	36	25.092	51	24.808
7	22.605	22	23.942	37	25.127	52	24.768
8	22.656	23	24.038	38	25.151	53	24.727
9	22.718	24	24.132	39	25.162	54	24.686
10	22.790	25	24.226	40	25.163	55	24.646
11	22.870	26	24.318	41	25.151	56	24.607
12	22.957	27	24.409	42	25.126	57	24.567
13	23.048	28	24.499	43	25.097	58	24.528
14	23.142	29	24.586	44	25.064	59	24.487
15	23.239	30	24.670	45	25.032	60	24.449

B-28 @ 6', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Results Sheet for Sample: B-29 @ 5'

Job Name: BSK Associates
Job Number: DB21.1033.00
Sample Number: B-29 @ 5'
Job #: G2026810F
Job Name: Jasmine

Instrument Description: Decagon KD2 Pro
Probe: ☐ KS-1, 6 cm length, 1.3 mm diameter, single needle
☐ TR-1, 10 cm length, 2.4 mm diameter, single needle
☑ SH-1, 3 cm length, 1.3 mm diameter, dual needle, 6 mm spacing
Test Start Date: 1/14/21

Reading	Water Potential (-cm water)	Gravimetric Moisture Content (g/g, %)	Volumetric Moisture Content[1] (vol/vol, %)	Dry Bulk Density[1] (g/cm^3)	Test Temperature (°C)	K Thermal Conductivity W/(m·K)	ρ Thermal Resistivity °C·cm/W	C Specific Heat Capacity $MJ/(m^3 \cdot K)$	D Thermal Diffusivity (mm^2/s)
Initial	---	15.85	28.35	1.79	22.78	1.499	66.7	3.340	0.449
Saturated	0	20.13	36.00	1.79	19.36	1.520	65.8	3.160	0.481
Oven Dry	---	0.00	0.00	1.79	23.32	0.330	303.4	1.713	0.192

--- = Value not measured.

[1] Adjusted for volume changes during testing, if applicable.

Thermal Properties Data

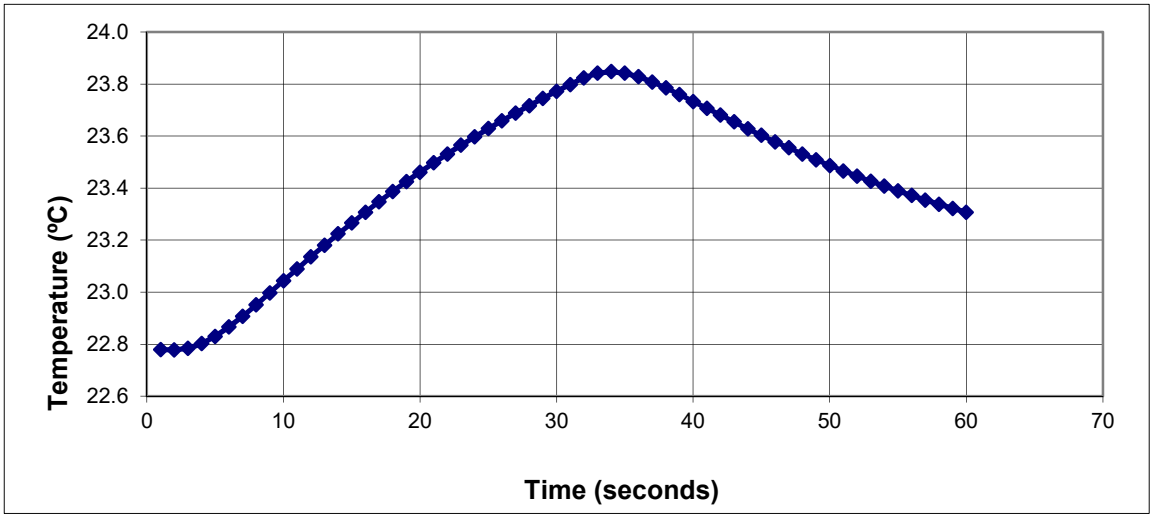
Sample Number: B-29 @ 5'
Potential (-cm water): Initial

Test Date/Time:	1/14/21 1:23 PM	*K (W/(m·K)):*	1.499
Sensor:	SH-1	*ρ (°C·cm/W):*	66.7
Test Temp.(°C):	22.8	*C (MJ/(m³·K)):*	3.340
KD2 Pro Sample ID:	B-29J-AR	*D (mm²/s):*	0.449
Power (W/m):	24.790	*Err:*	0.0025
Current (amps):	0.154		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	22.779	16	23.307	31	23.798	46	23.578
2	22.778	17	23.348	32	23.824	47	23.555
3	22.784	18	23.387	33	23.842	48	23.531
4	22.802	19	23.425	34	23.848	49	23.509
5	22.830	20	23.461	35	23.842	50	23.487
6	22.866	21	23.497	36	23.828	51	23.466
7	22.907	22	23.531	37	23.808	52	23.446
8	22.951	23	23.565	38	23.785	53	23.426
9	22.997	24	23.597	39	23.760	54	23.408
10	23.044	25	23.629	40	23.733	55	23.389
11	23.089	26	23.659	41	23.707	56	23.372
12	23.136	27	23.688	42	23.681	57	23.354
13	23.180	28	23.717	43	23.655	58	23.338
14	23.224	29	23.745	44	23.628	59	23.322
15	23.266	30	23.772	45	23.603	60	23.307

B-29 @ 5', Potential: Initial - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

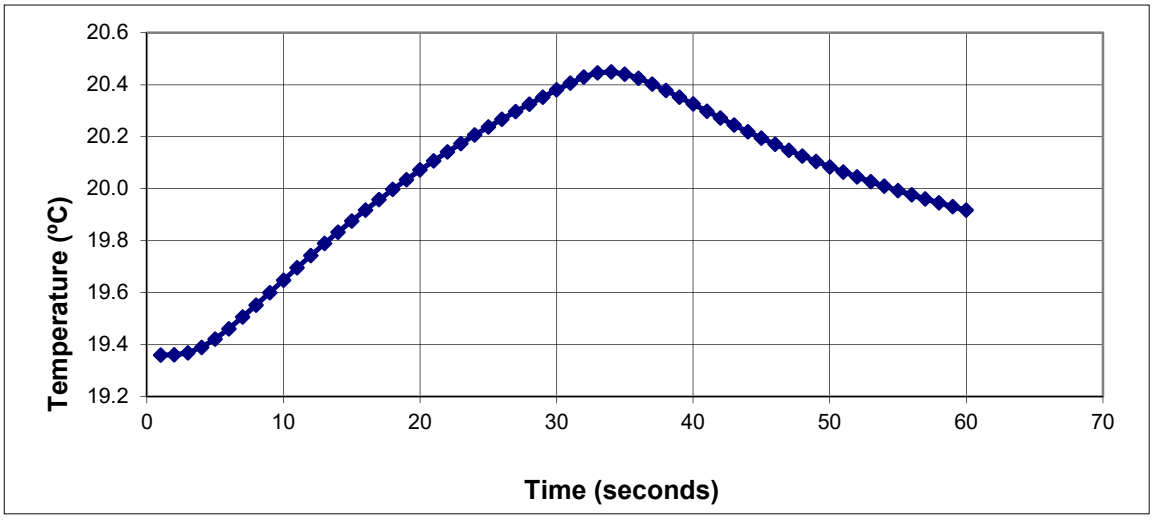
Sample Number: B-29 @ 5'
Potential (-cm water): 0

Test Date/Time:	1/15/21 3:35 PM	*K (W/(m·K)):*	1.520
Sensor:	SH-1	*ρ (°C·cm/W):*	65.8
Test Temp.(°C):	19.4	*C (MJ/(m³·K)):*	3.160
KD2 Pro Sample ID:	B-29J-SA	*D (mm²/s):*	0.481
Power (W/m):	23.680	*Err:*	0.0029
Current (amps):	0.151		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	19.360	16	19.918	31	20.406	46	20.171
2	19.361	17	19.958	32	20.430	47	20.148
3	19.369	18	19.997	33	20.446	48	20.126
4	19.390	19	20.035	34	20.449	49	20.105
5	19.422	20	20.072	35	20.441	50	20.084
6	19.461	21	20.107	36	20.425	51	20.064
7	19.506	22	20.141	37	20.403	52	20.045
8	19.552	23	20.174	38	20.378	53	20.027
9	19.600	24	20.207	39	20.352	54	20.010
10	19.648	25	20.238	40	20.326	55	19.993
11	19.696	26	20.267	41	20.298	56	19.976
12	19.743	27	20.297	42	20.272	57	19.960
13	19.789	28	20.325	43	20.245	58	19.946
14	19.833	29	20.352	44	20.219	59	19.931
15	19.876	30	20.380	45	20.195	60	19.917

B-29 @ 5', Potential: 0 - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Thermal Properties Data

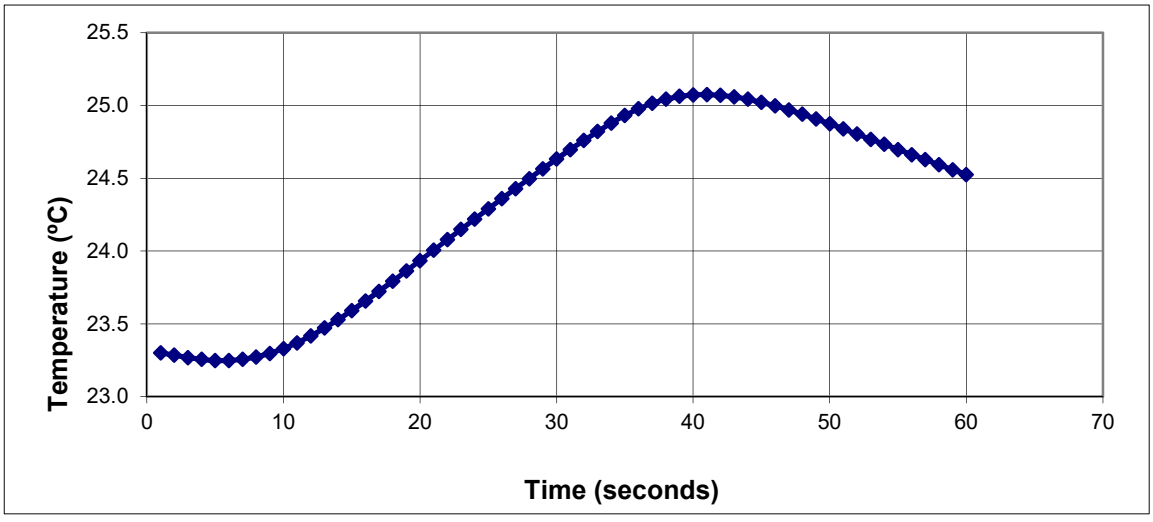
Sample Number: B-29 @ 5'
Potential (-cm water): Oven Dry

Test Date/Time:	1/18/21 4:56 PM	*K (W/(m·K)):*	0.330
Sensor:	SH-1	*ρ (°C·cm/W):*	303.4
Test Temp.(°C):	23.3	*C (MJ/(m³·K)):*	1.713
KD2 Pro Sample ID:	B-29J-OD	*D (mm²/s):*	0.192
Power (W/m):	22.960	*Err:*	0.0016
Current (amps):	0.149		

Raw Data

Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)	Second	Temp.(°C)
1	23.302	16	23.656	31	24.697	46	24.998
2	23.285	17	23.724	32	24.760	47	24.970
3	23.269	18	23.793	33	24.822	48	24.940
4	23.256	19	23.864	34	24.880	49	24.908
5	23.249	20	23.935	35	24.933	50	24.874
6	23.248	21	24.006	36	24.978	51	24.840
7	23.257	22	24.078	37	25.016	52	24.804
8	23.273	23	24.150	38	25.043	53	24.768
9	23.297	24	24.220	39	25.063	54	24.733
10	23.330	25	24.291	40	25.073	55	24.697
11	23.370	26	24.360	41	25.075	56	24.662
12	23.418	27	24.429	42	25.070	57	24.628
13	23.472	28	24.497	43	25.060	58	24.593
14	23.529	29	24.565	44	25.043	59	24.559
15	23.592	30	24.632	45	25.022	60	24.526

B-29 @ 5', Potential: Oven Dry - Temperature vs. Time Graph



Laboratory analysis by: D. O'Dowd
Data entered by: J. Hines
Checked by: J. Hines

Laboratory Tests and Methods

Tests and Methods

Thermal Properties:	ASTM D5334

Appendix I

Paleontological Resources Assessment



Jasmine Solar Project

Paleontological Resources Assessment

prepared for

SF Jasmine, LLC
50 California Street, Suite 820
San Francisco, California 94111

prepared by

Rincon Consultants, Inc.
7080 North Whitney Avenue, Suite 101
Fresno, California 93720

September 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Table of Contents

Executive Summary 1
Results of Investigation 1
Mitigation Measures 1
1 Introduction 2
1.1 Project Location and Description 2
2 Regulatory Setting 6
2.1 State 6
2.2 Local 6
3 Resource Assessment Guidelines 7
3.1 Paleontological Sensitivity 7
4 Methodology and Significance Thresholds 9
4.1 Methodology 9
4.2 Significance Thresholds 9
5 Description of Resources 10
5.1 Regional Geology 10
5.2 Locality Record Search Results 13
6 Evaluation and Impact Analysis 14
6.1 CEQA Checklist 14
6.2 Paleontological Sensitivity Evaluation 14
6.3 Impact Analysis 15
7 Mitigation Measures 16
8 References 17

Tables

Table 1 Museum Records Search Results 13
Table 2 Summary of Impacts 14

Figures

Figure 1 Regional Location 4
Figure 2 Project Location 5
Figure 3 Geologic Units and Paleontological Sensitivity in the Project Area 11

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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by SF Jasmine, LLC to conduct a paleontological resource assessment for the Jasmine Solar Project (project) in the San Joaquin Valley of Kern County, California. This study has been prepared in conformance with the California Environmental Quality Act (CEQA) and includes a records search, literature review, and paleontological sensitivity assessment consistent with the professional standards of the Society of Vertebrate Paleontology (SVP) (2010). The purpose of the literature review and records search was to identify the geologic unit(s) underlying the project and determine whether previously recorded paleontological localities occur either within the project boundaries or elsewhere in the same geologic unit. Using the results of the literature review and records search, the paleontological resource potential of the project area was determined in accordance with the 2010 SVP guidelines.

Results of Investigation

Published geologic mapping indicates that the project area is entirely mapped by a single geologic unit: Quaternary young (Holocene) alluvial fan deposits (Qf). A records search for paleontological locality data within the project area and the vicinity was obtained from the Natural History Museum of Los Angeles County (NHMLAC) and online records were reviewed at the University of California's Museum of Paleontology. According to the record searches, no vertebrate fossil localities have been previously recorded directly in the project boundary; however, multiple vertebrate fossil localities have been previously recorded nearby within Quaternary old (Pleistocene) sedimentary deposits. These localities yielded scientifically significant fossilized specimens of large terrestrial mammals, rodents, birds, and fish (Bell 2021). Based on this assessment, the surficial geology of the project area has a low paleontological sensitivity at or near the surface, increasing with depth. Quaternary old (Pleistocene) alluvial sediments may underlie Quaternary young (Holocene) alluvial fan deposits at extensive depths (exceeding 100 feet below ground surface) in the vicinity of the project. As proposed, ground disturbing activities associated with the proposed foundations for mounting structures can range from 5 to 20 feet below ground surface. Therefore, the potential for encountering fossil resources during project-related ground disturbance is low and impacts to paleontological resources are not anticipated. Although the potential for encountering fossil resources during project-related ground disturbance is low, a low potential for impacts to paleontological resources remains.

Mitigation Measures

Rincon recommends a Qualified Paleontologist be retained prior to any excavation activity to develop and implement a Worker's Environmental Awareness Program (WEAP) to train all site personnel on procedures to be implemented should unanticipated fossils be encountered during construction. Paleontological monitoring is not recommended at this time; however, in the event of an unanticipated fossil discovery during excavation activity, a Qualified Paleontologist shall be notified and retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted. These measures have been proven to be effective in reducing or eliminating adverse impacts to paleontological resources and would satisfy the requirements of the California Environmental Quality Act.

1 Introduction

Rincon Consultants, Inc. (Rincon) was retained by SF Jasmine, LLC to conduct a paleontological resource assessment for the Jasmine Solar Project (project) in the San Joaquin Valley of Kern County, California. This study has been prepared in conformance with the California Environmental Quality Act (CEQA) and includes a records search, literature review, and paleontological sensitivity assessment consistent with the professional standards of the Society of Vertebrate Paleontology (SVP) (2010).

Paleontological resources (i.e., fossils) are the remains or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils across the landscape is controlled by the distribution and exposure of the fossiliferous sedimentary rock units at and near the surface. Construction related impacts that typically affect or have the potential to affect paleontological resources include mass excavation operations, drilling/borehole excavations, trenching/tunneling, and grading.

This Paleontological Resources Assessment provides a description of the geologic units mapped at the surface within the project area, including types of fossils known to occur within the units (if any), the paleontological sensitivity for each unit, a review of relevant agency regulation, an assessment of potential impacts from project development, and recommended mitigation measures for the protection and recovery of significant fossils that may be impacted. This study has also been conducted in accordance with the requirements of the California Environmental Quality Act (CEQA). The County of Kern (County) is the CEQA Lead Agency for the project.

1.1 Project Location and Description

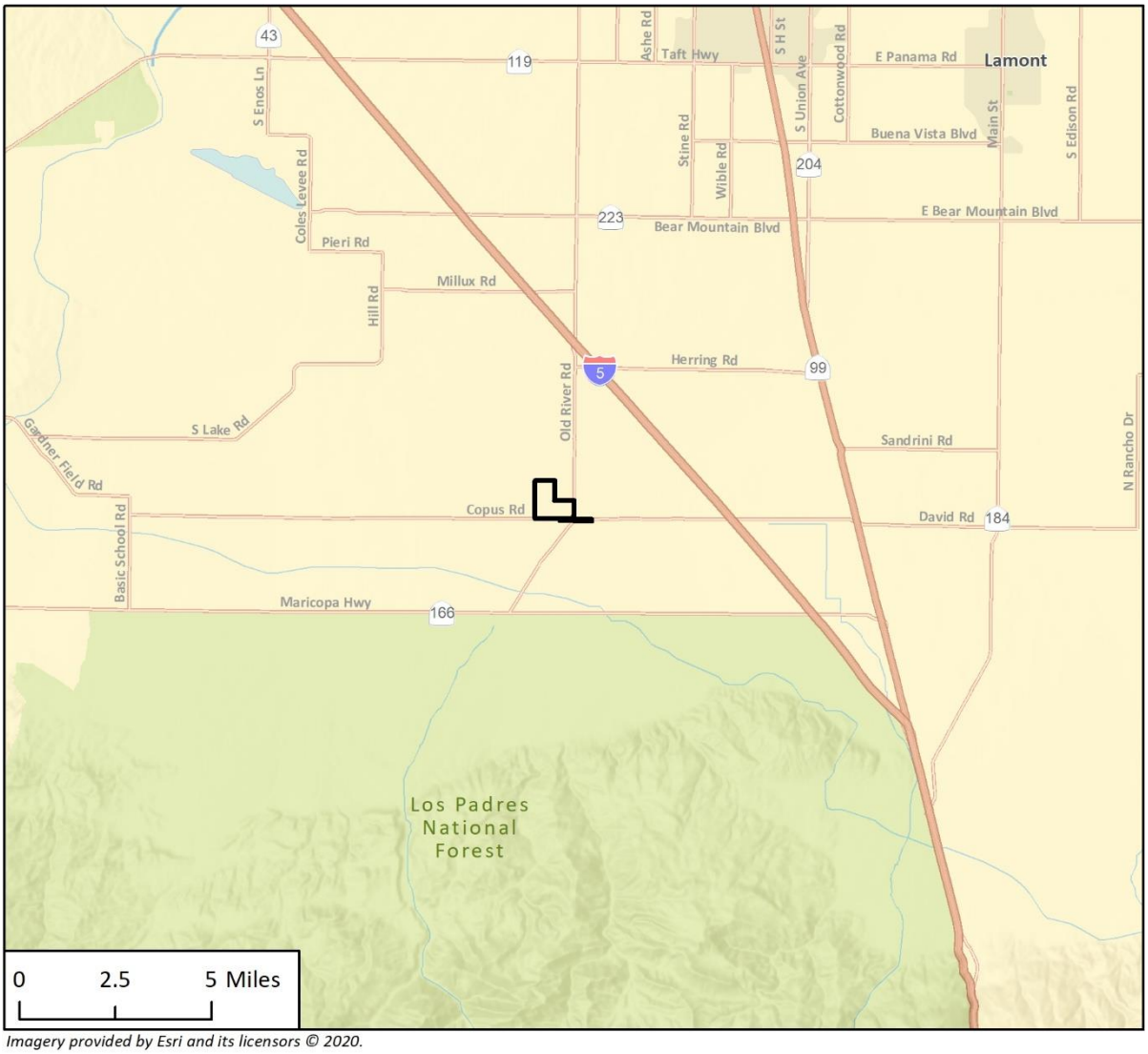
The Jasmine Solar Project ("project") is comprised of three assessor's parcels ("project area") in southwestern unincorporated Kern County, California. The project is located approximately eight miles northwest of the community of Mettler and approximately 10 miles east of the community of San Emidio, approximately two miles southwest of Interstate Highway 5 and approximately two miles north of California State Route 166. The project area falls within the *Conner SW, California* and *Coal Oil Canyon, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangles. The USGS Public Lands Survey System maps the area as Township 32 south, Range 27 east, Mount Diablo Meridian. The project area is on Assessor's Parcel Number (APN) 295-130-36 and the proposed gen-tie corridor runs through APNs 295-130-36 and 295-130-80. The total area of the site is approximately 520 acres. The project area is surrounded by actively farmed agricultural land, zoned as Intensive Agriculture by the Kern County General Plan.

The proposed project would involve the construction of a 70-megawatt (MW) utility-scale solar facility on approximately 492 acres of the 520-acre site. Power generated by the project will be transferred to the PG&E Lakeview Substation via a 0.5-mile gen-tie line that will enter through the northwest corner of the substation property. The project is anticipated to result in full buildout of the entire PV area (i.e., impacts to 100 percent of the project area), with partial impacts along the gen-tie corridor for transmission pole placement and access road.

Construction of the facility will include site preparation, grading and earthwork, concrete foundations, structural steel work, electrical/instrumentation work, architecture, and landscaping. Earthmoving activities are expected to be limited to the construction of access roads, operation and

maintenance buildings, substations, energy storage systems, and storm water protection or storage (detention) facilities. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas. The foundations for the mounting structures will require excavations to depths ranging from 5 to 20 feet below ground surface, depending on the structure, soil conditions, and wind loads. Figure 1, Regional Location, shows the location of the project area in the region and Figure 2, Project Location, depicts the site in its neighborhood context.

Figure 1 Regional Location



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Project Area

N

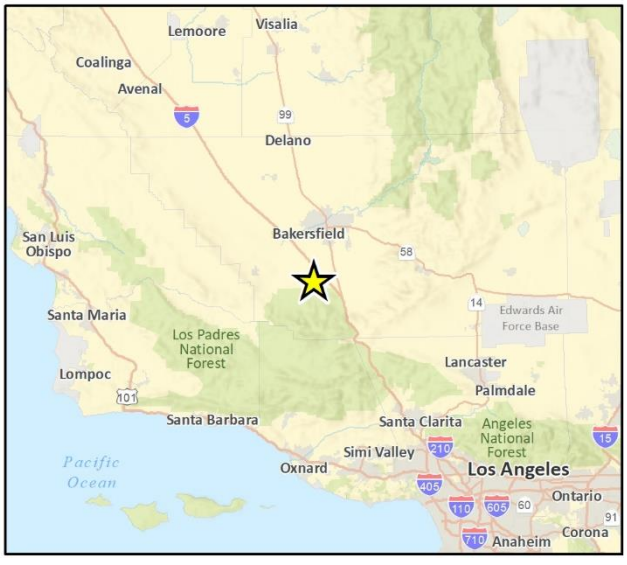
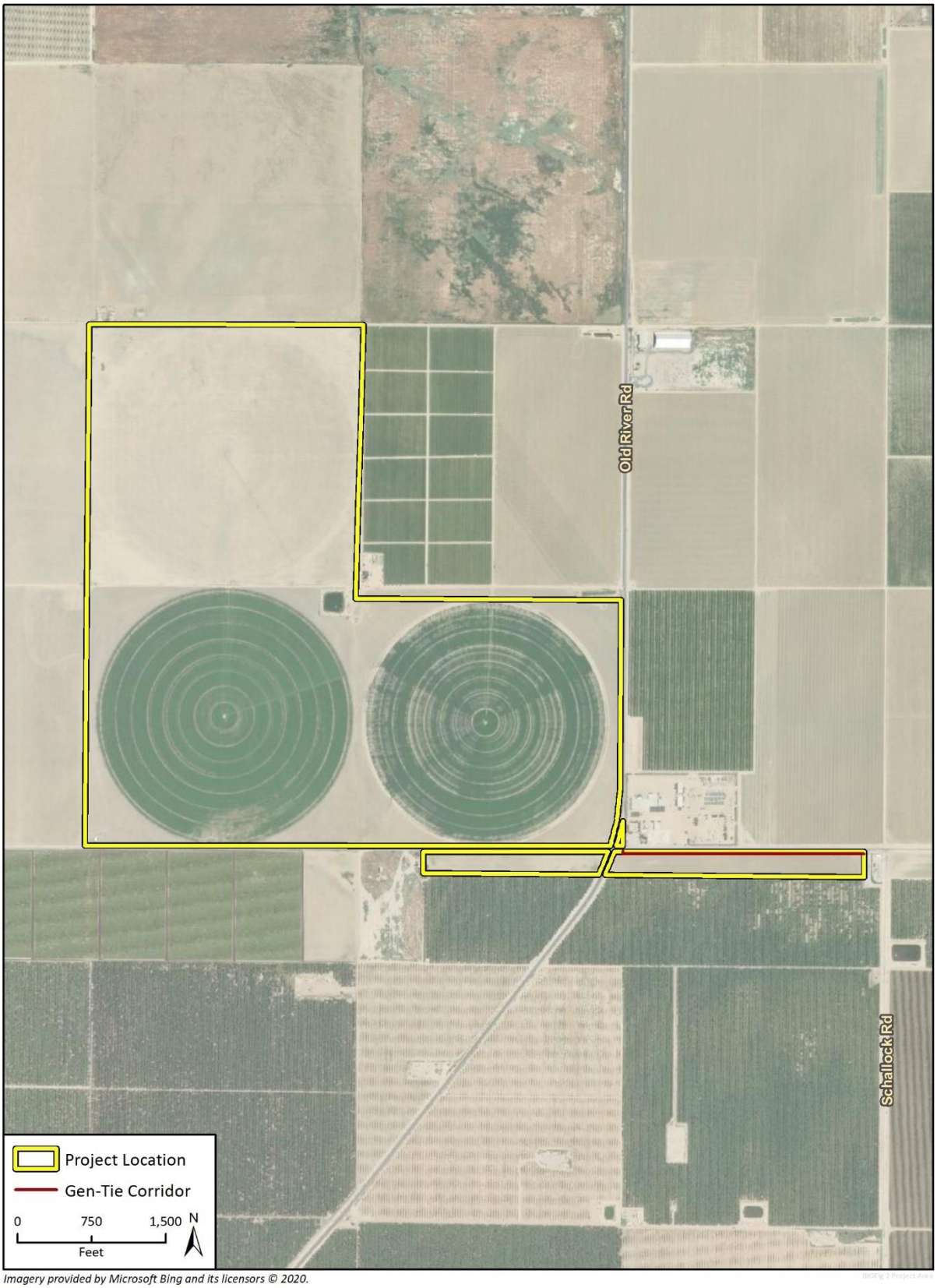


Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2020.

2 Regulatory Setting

Paleontological resources are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws, ordinances, regulations, and standards. Regulations applicable to potential paleontological resources on the project area are summarized below.

2.1 State

California Environmental Quality Act

CEQA requires public agencies and private interests to identify the potential environmental consequences of their proposed projects on any object or site considered to be a historical resource of California (California Public Resources Code [PRC], section 21084.1, California Code of Regulations Title 14, section 15064.5). Appendix G of the *State CEQA Guidelines* (California Code of Regulations Title 14, Chapter 3) provides an Environmental Checklist of questions including a single question related to paleontological resources (Section VII.f) as follows: "Would the project directly or indirectly destroy a unique paleontological resource or site…?"

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review. The SVP defines a Significant Paleontological Resource as:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) [p. 11] (SVP 2010).

The loss of significant paleontological resources would be a significant impact under CEQA. The CEQA lead agency is responsible for ensuring that paleontological resources are protected in compliance with CEQA and other applicable statutes.

2.2 Local

Kern County

Kern County addresses Paleontological Resources within the Kern County General Plan, Section 1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation. In areas of known paleontological resources, the County is to address the preservation of these resources when feasible.

3 Resource Assessment Guidelines

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under CEQA. This assessment satisfies CEQA (13 Public Resource Code [PRC], 2100 et seq.) and PRC Section 5097.5 (Stat. 1965, c 1136, p. 2792) requirements, and follows guidelines and significance criteria specified by the SVP *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP 2010).

3.1 Paleontological Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into geologic deposits (e.g., formations) within which fossils are buried, and result in physical damage to or destruction of the fossils. Because fossils are the remains of prehistoric animal and plant life, they are nonrenewable. Such impacts have the potential to be significant under CEQA guidelines and may require mitigation.

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography (study of historical processes responsible for past geographic distributions of genealogical lineages), or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well-represented lineages can be equally important for studying evolutionary patterns and processes, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiocarbon dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

Paleontological sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and previously recorded fossil localities from that unit. Paleontological sensitivity is derived from known fossil data collected from the entire geologic unit, not just from any one specific survey. The SVP system outlined in the SVP *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* is the generally accepted paleontological sensitivity classification scheme for projects on non-federal lands in California. Rincon has characterized the paleontological sensitivity for the proposed project according to the SVP procedures, as described below.

The SVP describes sedimentary rock units as having high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The SVP sensitivity categories are:

I. High Potential. Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and

some volcaniclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.

II. **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.

III. **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.

IV. **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection or impact mitigation measures relative to paleontological resources.

4 Methodology and Significance Thresholds

4.1 Methodology

Paleontological resources are contained within the geologic deposits or bedrock that underlies the soil layer. Therefore, to determine whether a given project area has the potential to contain significant fossil resources at the subsurface, it is necessary to review relevant scientific literature to determine the geology and stratigraphy of the area. For this assessment, published geologic maps, fossil locality data, and literature were reviewed to identify the geologic units present at and below the surface within the project boundary, assess the paleontological sensitivity of the geologic units identified, and to determine the potential impacts to non-renewable paleontological resources from project development.

Based on a review of aerial imagery, the project area is located on a flat (lacking any significant topographic relief), alluvial plain with low to moderate density vegetation consisting primarily of heavily disturbed agricultural fields. The project area is devoid of any bedrock exposures and has limited ground visibility; therefore, no paleontological field survey was conducted for this analysis. However, a 100 percent pedestrian survey was conducted for cultural resources over the entire project study area by qualified archeologists. Any potential paleontological resources would have been recorded by the field archeologists and brought to the attention of the project paleontologist to be evaluated and addressed in this report.

A formal paleontological locality search was requested at the NHMLAC on July 21, 2021. In addition, Rincon reviewed the online paleontological collections database of the University of California Museum of Paleontology (UCMP) to identify known fossil localities in Kern County from geologic formations similar to those identified in the project area.

Following the paleontological inventory and assessment, the paleontological sensitivity ratings of the geological units were assigned based on the findings of the record search and literature review. Based on the paleontological sensitivity findings, the potential impact to nonrenewable paleontological resources due to project development was determined in accordance with the professional standards of the SVP (2010).

4.2 Significance Thresholds

Based on the CEQA Guidelines, the proposed project would result in a significant impact if it would:

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5 Description of Resources

5.1 Regional Geology

California is divided into 11 geomorphic provinces that are "naturally defined geologic regions that display a distinct landscape or landform" (California Geologic Survey [CGS] 2002). The project area lies within the San Joaquin Valley region of the Great Valley geomorphic province, approximately two miles north of the California Aqueduct. The Great Valley is an elongate lowland approximately 50 miles wide and 400 miles long. It is bounded to the east by the Sierra Nevada Range and to the west by the Coast Range. A relatively undeformed basin, the Great Valley rises from about sea level to approximately 400 feet in elevation at the north and south ends. The northern portion of the valley, referred to as the Sacramento Valley, is drained by the Sacramento River, while the southern portion of the valley, referred to as the San Joaquin Valley, is drained by the San Joaquin River. Consequently, the Great Valley is predominantly alluvial, flood, and delta plains formed by these two major river systems (Weissmann 2005).

Geology and Paleontology of the Project Area

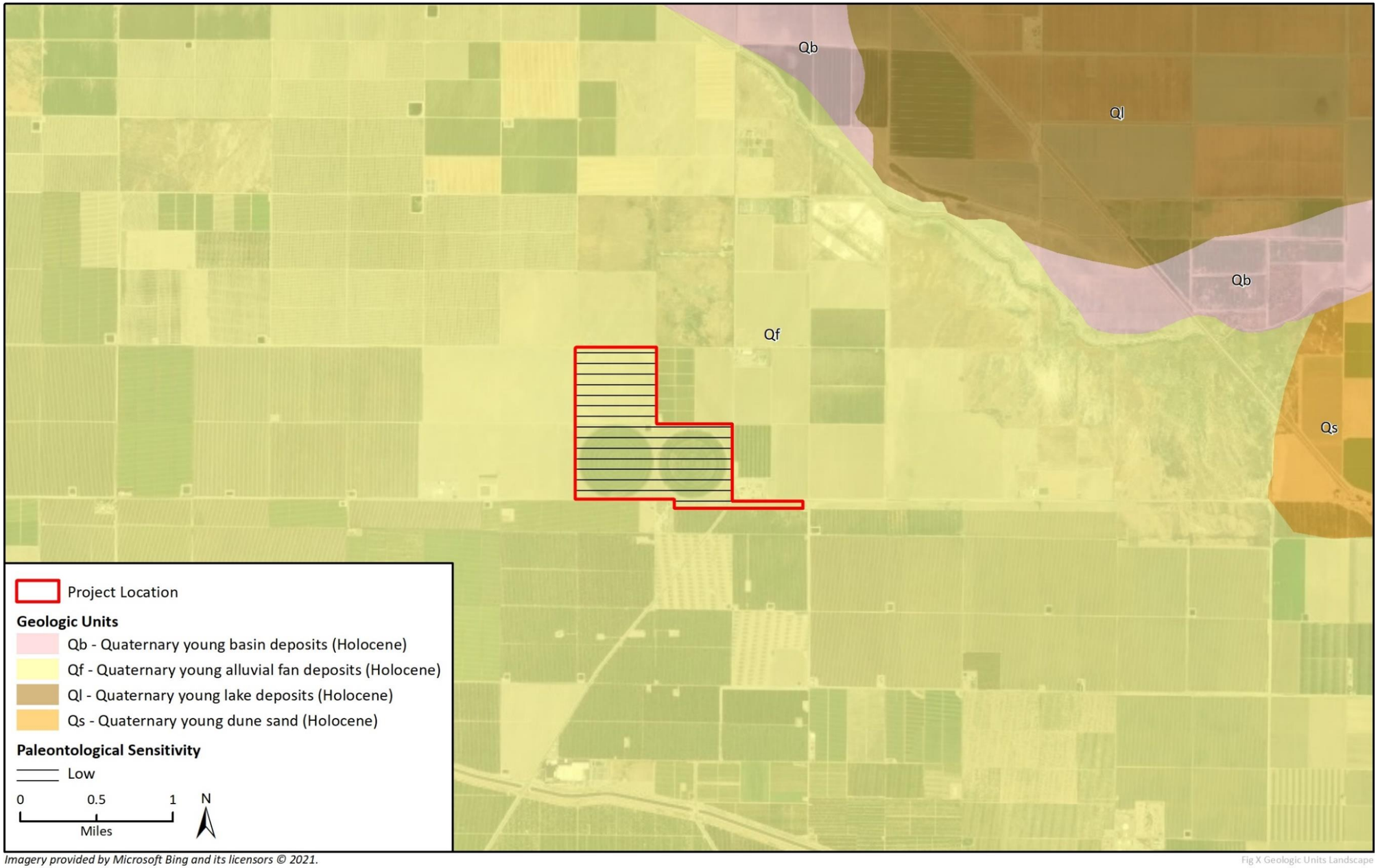
The project area is mapped at a scale of 1:250,000 by Smith (1964) and includes a single mapped geologic unit at ground surface: Quaternary young (Holocene) alluvial fan (Qf). Figure 3, Geologic Units and Paleontological Sensitivity in the project area and surrounding vicinity, depicts the surficial geologic units in the project area, as well as the corresponding paleontological sensitivity assigned to each of these units.

Quaternary young (Holocene) alluvial fan deposits (Qf), derived from the San Emigdio Mountains to the south, form an unconsolidated layer of alluvial sand, silt, and gravel across much of the project area and San Joaquin Valley. Quaternary young-aged units are too young to contain scientifically significant paleontological resources and are considered to have low paleontological sensitivity. However, these younger sedimentary deposits may grade downward into Quaternary old (Pleistocene) alluvial deposits, which may preserve fossil remains, at unknown depths within the project area.

Quaternary old (Pleistocene) sedimentary deposits (i.e., Qc, QP) are mapped at the margins of the San Emigdio Mountains approximately six miles south of the project area. These units are not mapped within the project area but are expected to underlie the project area at extensive or unknown depths. Quaternary old (Pleistocene) sedimentary deposits would be expected to occur at shallow to moderate depths near the margins of the basin; however, the depth at which Quaternary old (Pleistocene) sedimentary deposits occur may vary throughout a basin, ranging from shallow to more than 100 feet depending on the local topography. In the absence of geotechnical data, the depth to Quaternary old (Pleistocene) sedimentary deposits cannot be reliably estimated; however, sensitive older deposits are unlikely to occur at depths less than 100 feet within the project area based on the project area being situated closer to the center of the basin.

Quaternary old (Pleistocene) sedimentary deposits have proven to yield significant vertebrate fossil localities in Kern County and throughout southern California from the coastal areas to the inland valleys. Localities have produced fossil specimens of terrestrial mammals

Figure 3 Geologic Units and Paleontological Sensitivity in the Project Area



Imagery provided by Microsoft Bing and its licensors © 2021.
Geology information provided by Smith, A.R., 1964.

Fig X Geologic Units Landscape

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such as mammoth, horse, elephant, camel, bison, birds, rodents, and reptiles (Jefferson 1991; Paleobiology Database 2021; Springer et al. 2009; UCMP 2021). Therefore, Quaternary old (Pleistocene) sedimentary deposits (e.g., Qc, QP) are considered to have a high paleontological sensitivity.

5.2 Locality Record Search Results

A search of the paleontological locality records at the NHMLAC resulted in no previously recorded fossil localities within the project boundary; however, at least 16 Pleistocene vertebrate localities (LACM VP 1543, 3775, 5151-5157, 5168, 5931, 6178, 6731, 7013, 7262 7891, CIT 266) were identified at shallow or unknown depths in the general vicinity of the project, but in areas where sensitive units would be expected to occur at shallow depths. The closest vertebrate locality, LACM VP 6731, produced fossil specimens of unspecified vertebrates less than 15 miles south-southwest of the project area near Maricopa. LACM VP 3775 yielded fossil specimens of camel (Camelidae) and rabbit (Lagomorpha) less than 20 miles west-northwest of the project area. LACM VP 5931, located less than 60 miles northeast-east of the project (near Hoffman Canyon), produced fossil specimens of rabbit/hare (Leporidae) near the surface. LACM VP 1543, 5151-5157, 5168, 6178, 7013, 7262, and CIT 266 yielded a suite of fossil specimens at shallow depths, including camel (*Camelops*), camelid (*Hemiauchenia*), bison (*Bison antiquus*), horse (Equidae), deer (Cervidae), mammoth (*Mammuthus*), Carnivora scapula (possibly *Smilodon*), fish (Osteichthyes), bird (Aves), and other unidentified vertebrates (Bell 2021).

A supplemental review of the museum records maintained in the UCMP online collections database did not yield records of any vertebrate fossil localities in the general vicinity of the project area. The closest UCMP vertebrate locality on record is UCMP 1041, which produced a proboscidean tibia (*Elephas*) and a camel (*Procamelus*) fossil from Pleistocene sedimentary deposits in an unspecified location in Kern County (UCMP 2021). The results of the museum records search are summarized in Table 1.

Table 1 Museum Records Search Results

Locality No.	Geologic Unit	Age	Taxa	Depth of Recovery
LACM VP 6731	Unknown formation	Pleistocene	Unspecified vertebrates	Unreported
LACM VP 3775	Tulare formation	Pleistocene	Camel (Camelidae), rabbit (Lagomorpha)	Unreported
LACM VP 5931	Unknown formation	Pleistocene	Rabbit/hare (Leporidae)	Surface
LACM VP 1543, 5151-5157, 5168, 6178, 7013, 7262, CIT 266	China Lake formation	Pleistocene	Camel (*Camelops*), camelid (*Hemiauchenia*), bison (*Bison antiquus*), horse (Equidae), deer (Cervidae), mammoth (*Mammuthus*), Carnivora scapula (possibly *Smilodon*), fish (Osteichthyes), bird (Aves), other unidentified vertebrates	Largely unreported, but "shallow" depths noted
UCMP 1041	Unknown formation	Pleistocene	Proboscidean (*Elephas*), camel (*Procamelus*)	Unreported

Source: Bell 2021; UCMP 2021

6 Evaluation and Impact Analysis

6.1 CEQA Checklist

The following analysis is provided to support environmental documentation pursuant to CEQA. The conclusions of the study are summarized in Table 2.

Table 2 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance	Applicable Mitigation Measures
Geology and Soils		
Would the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	Less than significant impact with mitigation incorporated	GEO-1, GEO-2

6.2 Paleontological Sensitivity Evaluation

The paleontological sensitivity of the geologic units underlying the project was determined in accordance with criteria set forth by the SVP (2010) (Figure 3). Holocene sedimentary deposits, particularly those younger than 5,000 years old (younger than middle Holocene), are generally too young to contain fossilized material. Therefore, the Quaternary young (Holocene) alluvial fan deposits (Qf) mapped in the project area have been assigned a low paleontological sensitivity at or near the surface, increasing with depth. Based on the NHMLAC records search results and the prevalence of older, fossiliferous geologic units mapped at the surface within the region, Quaternary old (Pleistocene) sedimentary deposits (e.g., Qc, QP) may underlie Quaternary young (Holocene) alluvial fan deposits (Qf) at extensive depths within the project area and the immediate vicinity (Smith 1964). Although paleontologically sensitive older units may be overlain by thick units of low sensitivity younger alluvium (potentially exceeding 100-feet in thickness), the depth at which geologic units transition from low sensitivity younger units to high sensitivity older units is highly variable. Accurately assessing the boundaries between younger and older units is generally not possible without some form of radiometric dating, or fossil analysis, so conservative estimates of the depth at which paleontologically sensitive units may occur ensures impact avoidance. Quaternary old (Pleistocene) sedimentary deposits that are likely to occur at an unknown depth in the project area have a high paleontological sensitivity throughout California (Bell 2021; Paleobiology Database 2021; UCMP 2021).

6.3 Impact Analysis

Threshold 1:	Would the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

IMPACT GEO-1 GROUND DISTURBING ACTIVITIES ASSOCIATED WITH THE PROJECT HAVE A LOW POTENTIAL TO UNEARTH OR IMPACT PREVIOUSLY UNIDENTIFIED PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Ground disturbing activities associated with the Project have a low potential to unearth or impact previously unidentified paleontological resources. Impacts would be less than significant with mitigation incorporated. Paleontological resources are nonrenewable and are vulnerable to impacts from development related activities. Fossils provide important information for our understanding of past environments, the history of life, past species diversity, how species respond to climate change, and many other lines of scientific inquiry. Impacts to fossils and fossil localities, and loss of fossils from looting or other destructive activity at fossil sites results in the direct loss of scientific data and directly impacts the ability to conduct scientific research on evolutionary patterns and geological processes. Grading, trenching and other ground disturbing activities associated with development of this project that may impact previously undisturbed, paleontologically sensitive geologic deposits have the potential for the destruction of significant paleontological resources.

Ground disturbing activities in previously undisturbed portions of the project area may result in significant impacts to paleontological resources under Appendix G of CEQA if Quaternary old (Pleistocene) sediments are impacted at a depth. Impacts would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Activities with the potential to impact paleontological resources include grading, excavation, trenching or other activity that disturbs geologic formations with a high paleontological sensitivity.

As proposed, ground disturbing activities associated with the mounting structures will range from 5 to 20 feet below ground surface and limited grading will occur in heavily disturbed agricultural fields for PV installation. The surficial geology of the project area has a low paleontological sensitivity that increases with depth. Quaternary old (Pleistocene) sediments (e.g., Qc, QP) may underlie Quaternary young (Holocene) alluvial fan deposits (Qf) at unknown depths within the project area but are assumed to occur below depths of 100 feet based on the distance to the surrounding hills and basin margins. Therefore, the project area is determined to have low potential for paleontological resources at or near the surface, and a high paleontological sensitivity at depths exceeding 100 feet below ground surface. Given that the fossiliferous deposits may occur at greater depths than anticipated project disturbance and that the project site has been previously disturbed, the potential for encountering fossil resources during project-related ground disturbance is low and impacts to paleontological resources are not anticipated. Although the potential for encountering fossil resources during project-related ground disturbance is low, a low potential for impacts to paleontological resources remains. Based on the current study, Rincon recommends a finding of ***less than significant impact to paleontological resources with mitigation*** under CEQA.

7 Mitigation Measures

The following measures are recommended for unanticipated fossil discoveries if high sensitivity units occur at depths of less than 100 feet. Mitigation Measures GEO-1 and GEO-2 would apply only to those phases of project construction that involve ground disturbance and would ensure that any unanticipated fossils present are preserved to ensure that potential impacts to paleontological resources would be less than significant by providing for the recovery, identification, and curation of previously unrecovered fossils.

GEO-1 Worker's Environmental Awareness Program

Prior to any project ground disturbance, a Qualified Paleontologist shall be a Worker's Environmental Awareness Program (WEAP) will be prepared to train all site personnel prior to the start of work. The WEAP training will include at a minimum the following information:

- Review of local and state laws and regulations pertaining to paleontological resources.
- Types of fossils that could be encountered during ground disturbing activity.
- Photos of example fossils that could occur on site for reference.
- Instructions on the procedures to be implemented should unanticipated fossils be encountered during construction, including stopping work in the vicinity of the find and contacting a qualified professional paleontologist.

GEO-2 Unanticipated Discovery

In the event an unanticipated fossil discovery is made during project development, construction activity should be halted in the immediate vicinity of the fossil, and a Qualified Paleontologist should be notified and retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted. Work near the area of the discovery will resume once the find is properly documented and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring will be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.

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Appendix J-1

Phase 1 Environmental Site Assessment



Phase I Environmental Site Assessment

Jasmine Solar Project
Kern County, California

prepared for
SF Jasmine, LLC

prepared by
Rincon Consultants, Inc.

May 4, 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Rincon Consultants, Inc.

180 North Ashwood Avenue
Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

May 4, 2022
Project No.: 20-09824

Christine Lan
Project Development Manager
Idemitsu Renewables
Via email: christine.lan.0400@idemitsurenewables.com

Subject: **Phase I Environmental Site Assessment**
Jasmine Solar Project
Kern County, California

Dear Ms. Lan:

This report presents the findings of a Phase I Environmental Site Assessment (ESA) completed by Rincon Consultants, Inc. (Rincon) for the Jasmine Solar Project property located in Kern County, California. The Phase I ESA was performed in accordance with our proposal dated September 8, 2020 and Master Services Agreement and Statement of Work No. 1, dated October 1, 2020.

The accompanying report presents our findings and provides an opinion regarding the presence of recognized environmental conditions in connection with the subject property. Our work program for this project, as referenced in our contract, is intended to meet the guidelines outlined in the American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process* (ASTM Standard E1527-13). Our scope of services, pursuant to ASTM practice, did not include any inquiries with respect to asbestos, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, vapor intrusion or other indoor air quality, mold, or high-voltage power lines.

Thank you for selecting Rincon for this project. If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,
Rincon Consultants, Inc.

Lisa Bestard
Senior Environmental Scientist

Ryan Thacher, PhD, PE
Director

Amanda Duval
Environmental Scientist

Table of Contents

Executive Summary 1

Introduction 2
- Purpose 2
- Scope of Services 3
- Significant Assumptions, Limitations, Deviations, Exceptions, Special Terms, and Conditions 4
- User Reliance 4
- Site Description 4

User-Provided Information 6

Records Review 8
- Physical Setting Sources 8
- Standard Environmental Record Sources 8
- Additional Environmental Record Sources 13
- Review of State of California Geologic Energy Management Division (CalGEM) Records 14
- Review of National Pipeline Mapping System Records 14
- Review of California Statewide PFAS Investigation 14
- Known or Suspect Contaminated Release Sites with Potential Vapor Migration 15
- Historical Use Information on the Property and the Adjoining Properties 16

Interviews 20
- Interview with Owner 20
- Interview with Site Manager 21
- Interviews with Occupants 21
- Interviews with Local Government Officials 21
- Interviews with Others 22

Site Reconnaissance 23
- Methodology and Limiting Conditions 23
- Current Use of the Property and Adjacent Properties 23
- Past Use of the Property and Adjacent Properties 23
- Current or Past Uses in the Surrounding Areas 23
- Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions 23
- General Description of Structures 23
- Roads 24
- Potable Water Supply 24
- Sewage Disposal System 24
- Interior and/or Exterior Observations 24

Evaluation 26
- Findings 26
- Opinions 26
- Conclusions & Recommendations 27

Rincon recommends that soil sampling be conducted to assess the potential risk to onsite construction workers. 27
Deviations 27
References 28
Signatures of Environmental Professionals 29
Qualifications of Environmental Consultants 30

Tables

Table 1 Current Uses of Adjacent Properties 5
Table 2 EDR Listing Summary of the Subject Property and Select Sites Within One-Half Mile of the Subject Property 11

Figures

Figure 1 Vicinity Map
Figure 2 Site Map
Figure 3 Adjacent Land Use Map
Figure 4 Site Photographs
Figure 5 Site Photographs

Appendices

Appendix A Interview Documentation
Appendix B Regulatory Records Search
Appendix C Historical Research Documentation

Executive Summary

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the Jasmine Solar Project located in Kern County, California (Figure 1, Vicinity Map). The Phase I ESA was performed for SF Jasmine, LLC by Rincon Consultants, Inc. (Rincon). SF Jasmine, LLC has requested this assessment and will use the information for the purpose of developing the subject property. The subject property is currently agricultural land and an oil well enclosure.

The subject property is located in an area that is primarily composed of agricultural, residential, and commercial land uses. Properties in the vicinity of the subject property include agricultural land, commercial businesses, residences, and vacant land.

Rincon performed a reconnaissance of the subject property on November 20, 2020. The purpose of the reconnaissance was to observe existing conditions and to obtain information indicating the presence of recognized environmental conditions (RECs) in connection with the subject property. Two corrosion inhibitor tanks, two agricultural ponds, and three diesel above-ground storage tanks (ASTs) were observed on the subject property. One of the ASTs for the water pump was observed to have a minor leak .

A regulatory database search was conducted by Environmental Data Resources (EDR) for sites that generate, store, treat, or dispose of hazardous materials or sites for which a release or incident has occurred. The search was conducted for the subject property and included data from surrounding sites within a specified radius of the property. The subject property was listed on the NPDES, CERS, FINDS, CUPA Listings, HWTS, HAZNET, and WMUDS/SWAT databases. These listings are not indicative of a release. Three adjacent properties were listed in non-release databases searched by EDR. These properties are not expected to impact the subject property.

Historical sources reviewed as part of the Phase I ESA include aerial photographs and topographic maps. The photos and maps reviewed indicate the subject property was in use for agricultural purposes from as early as 1946 through present day. However, based on the proposed use of the subject property as a solar facility, and because there is no evidence of releases of agricultural chemicals to the environment, the agricultural use is not expected to impact the subject property. In addition, agricultural ponds were identified that may have been subject to accumulation of agricultural chemicals, if used at the subject property. It is Rincon's understanding that the agricultural pond located on the southeastern portion of the subject property (agricultural pond #2) will be filled in for expansion of the substation, and that the agricultural pond located near the central portion of the subject property (agricultural pond #1) will not be disturbed during the solar facility development.

Based on the findings of this Phase I ESA, it is our opinion that there is one REC associated with the subject property as follows:

- Onsite agricultural ponds

Rincon recommends that soil sampling be conducted to assess the potential risk to onsite construction workers.

Introduction

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted for the Jasmine Solar Project located in Kern County, California (Figure 1, Vicinity Map). The Phase I ESA was performed by Rincon Consultants, Inc. (Rincon) for SF Jasmine, LLC (Client) in general conformance with American Society for Testing and Materials (ASTM) E1527-13 and our Master Services Agreement and approved Statement of Work No. 1 dated October 1, 2020. The following sections present our findings and provide our opinion as to the presence of recognized environmental conditions (RECs) on the subject property.

Purpose

SF Jasmine, LLC has requested this assessment and will use the information for the purpose of developing the subject property. The purpose of this Phase I ESA was to determine if there are RECs on the subject property, taking into account commonly and reasonably ascertainable information and to qualify for Landowner Liability Protections under the Brownfields Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

A REC is defined pursuant to ASTM E1527-13 as,

> "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; 3) under conditions that pose a material threat of a future release to the environment".

A Controlled REC is defined pursuant to ASTM E1527-13 as,

> "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report".

A Historical REC is defined pursuant to ASTM E1527-13 as,

> "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by regulatory authority, without subjecting the property to any required controls (for example, use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP [Environmental Professional] considers the past release to be a

recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition".

A *de minimis* condition is defined pursuant to ASTM E1527-13 as,

"a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions".

Scope of Services

The scope of services conducted during this study is outlined below:

- Performed a reconnaissance of the subject property to identify obvious indicators of the existence of hazardous materials.
- Observed adjacent or nearby properties from public thoroughfares in an attempt to see if such properties are likely to use, store, generate, or dispose of hazardous materials.
- Obtained and reviewed an environmental records database search to obtain information about the potential for hazardous materials to exist at the subject property or at properties located in the vicinity of the subject property.
- Reviewed files for the subject property and immediately adjacent properties as identified in the database report, as applicable.
- Reviewed the current United States Geological Survey (USGS) topographic map to obtain information about the subject property and regional topography and uses of the subject property and surrounding sites.
- Reviewed additional pertinent record sources (e.g., California Geologic Energy Management Division [CalGEM] records, online databases of hazardous substance release sites), as necessary, to identify the presence of RECs at the subject property.
- Reviewed the California State Water Resources Control Board (SWRCB) 2019 Statewide Per- and Polyfluoroalkyl Substances (PFAS) Investigation online Public Map Viewer regarding current PFAS orders at any facilities located in the vicinity of the subject property.
- Reviewed reasonably ascertainable historical resources (e.g., aerial photographs, topographic maps, fire insurance maps, city directories) to assess the historical land use of the subject property and adjacent properties.
- Provided a user interview questionnaire to a representative of the client, the user of the Phase I ESA.
- Provided a property owner interview questionnaire to the property owner or a designated subject property representative identified to Rincon by the client.
- Conducted interviews with other property representatives (e.g., key site manager, occupants), as applicable.
- Reviewed available client-provided information (e.g., previous environmental reports, title documentation).

Significant Assumptions, Limitations, Deviations, Exceptions, Special Terms, and Conditions

This work is intended to adhere to good commercial, customary, and generally accepted environmental investigation practices for similar investigations conducted at this time and in this geographic area. No guarantee or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from a site reconnaissance, review of an environmental database report, specified regulatory records and historical sources, and comments made by interviewees. This report is not intended as a comprehensive site characterization and should not be construed as such. Standard data sources relied upon during the completion of Phase I ESAs may vary with regard to accuracy and completeness. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research.

Rincon has not found evidence that hazardous materials or petroleum products exist at the subject property at levels likely to warrant mitigation. Rincon does not under any circumstances warrant or guarantee that not finding evidence of hazardous materials or petroleum products means that hazardous materials or petroleum products do not exist on the subject property. Additional research, including surface or subsurface sampling and analysis, can reduce Client's risks, but no techniques commonly employed can eliminate these risks altogether.

In addition, pursuant to ASTM E1527-13 practice, our scope of services did not include any inquiries with respect to asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to release of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance, wetlands, or high-voltage power lines.

User Reliance

SF Jasmine, LLC has requested this assessment and will use the information for the purpose of developing the subject property. This Phase I ESA was prepared for use solely and exclusively by SF Jasmine, LLC, Kern County, and SF Jasmine LLC. No other use or disclosure is intended or authorized by Rincon. Also, this report is issued with the understanding that it is to be used only in its entirety. It is intended for use only by the client, and no other person or entity may rely upon the report without the express written consent of Rincon.

Site Description

Project Description

The Jasmine Solar project is a 70-megawatt (MW) utility-scale solar project paired with energy storage that is located in northwestern Kern County, California. The project will interconnect at Pacific Gas and Electric's (PG&E) Lakeview Substation via a 0.5-mile generation-tie line that will enter through the northwest corner of the substation property. The project has an expected commercial operation date of December 2022.

Location

The subject property is an approximately 520-acre parcel located primarily west of Old River Road and north of Copus Road in Kern County, California (Figure 2, Site Map). The property is identified as a portion of Assessor's Parcel Numbers (APNs) 295-130-78, 295-130-36, and 295-130-80.

Subject Property and Vicinity General Characteristics

The subject property is currently used for agricultural purposes and the Grapevine Energy LLC "Bordeaux" facility associated with an onsite oil well.

The subject property is located in an area that is primarily composed of agricultural, residential, and commercial land uses. Properties in the vicinity of the subject property include agricultural land, commercial businesses, residences, and vacant land. The current adjacent land uses are described in Table 1 and depicted on Figure 3, Adjacent Land Use Map.

Table 1 Current Uses of Adjacent Properties

Area	Use
Northern Properties	Tilled agricultural field, a building pad, a debris pile, an abandoned trailer, a pesticide storage trailer, and a barn
Eastern Properties	Andrews AG Inc., Lakeview PG&E Substation, and agricultural buildings/land (orchards and row crops)
Southern Properties	Copus Road and vacant land followed by orchards, row crops, residences, and vacant land
Western Properties	Tilled agricultural fields

Descriptions of Structures, Roads, Other Improvements on the Subject Property

During the site reconnaissance, the Grapevine Energy Bordeaux Facility and the onsite oil and gas well, aboveground storage tanks (ASTs), two agricultural ponds, and water pumps with associated fuel tanks were observed on the subject property.

A chain-link fence was noted around the perimeter of the subject property. Access to the subject property is available from a driveway on Copus Road.

The following utility providers service the area:

- Electrical Service – Pacific Gas & Electric
- Natural Gas Service – Pacific Gas & Electric
- Water Service – Kern County Water Agency
- Sewer Service – Kern County Public Works
- Solid Waste Service – Kern County Waste Management

User-Provided Information

As described in ASTM E1527-13 Section 6, a User Questionnaire as provided by ASTM E1527-13 Appendix X3 was provided to Client. The purpose of the User Questionnaire is for the User of the Phase I ESA to provide actual knowledge pertaining to the subject property to help identify RECs. Diego Osnaya, Project Development Manager of Idenmitsu Renewables, completed the User Questionnaire as provided by ASTM Appendix X3 on December 10, 2020. A copy of the completed questionnaire is included as Appendix A.

Based on our review of the completed questionnaire, Mr. Osnaya indicated the following:

- The Phase I ESA is required by Kern County for a Conditional Use Permit/California Environmental Quality Act (CEQA) Environmental Impact Report (EIR).

Based on our review of the completed questionnaire, Mr. Osnaya reviewed the following sources of information and is unaware of information regarding the following:

- Recorded land title records that identify any environmental liens filed or recorded against the subject property
- Title Report that identifies information pertaining to environmental cleanup liens or AULs for the subject property

Based on our review of the completed questionnaire, Mr. Osnaya did not review the following sources of information and is unaware of information regarding the following:

- Recorded land title records that identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the subject property under federal, tribal, state or local law

Based on our review of the completed questionnaire, Mr. Osnaya is unaware of information regarding the following:

- Specialized knowledge or experience related to the subject property or nearby properties
- Reduction in value for the subject property relative to any known environmental issues
- Commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases
- Obvious indicators that point to the presence or likely presence of releases at the subject property
- Pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the subject property
- Pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property
- Notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products

Additionally, Mr. Osnaya indicated that the purchase price being paid for the subject property reasonably reflects the fair market value of the property, and he is not aware of a reduction in value for the subject property relative to any known environmental issues.

Records Review

Physical Setting Sources

Topography

The current USGS topographic map (Coal Oil Canyon Quadrangle, 2018) indicates that the subject property is situated at an elevation of approximately 400 feet above mean sea level with topography sloping down to the northeast. The adjacent topography consists of generally flat topography.

Geology and Hydrogeology

According to the California Geological Survey (CGS), *California Geomorphic Provinces, Note 36*[1], the subject property is located within the Great Valley Geomorphic Province. The Great Central 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.

Site Geology

According to the current USGS Geologic Map (Geologic map of California: Bakersfield sheet, 1964), the subject property is underlain by Quaternary nonmarine terrace deposits.

Regional Groundwater Occurrence and Quality

The subject property is located within the San Joaquin Valley groundwater basin (California Department of Water Resources, 2003).

During the preparation of this Phase I ESA, we reviewed the California SWRCB's online GeoTracker database to determine groundwater flow direction in the vicinity of the subject property. According to the *Quarterly Groundwater Monitoring and Groundwater Extraction Report Second Quarter 2020, 17731 Millux Road, Bakersfield, California* prepared by Rincon and dated August 2019, groundwater is reported to be between 31 and 39 feet below ground surface and flow toward the north-northeast. This property is located approximately 5.3 miles to the northwest of the subject property.

Standard Environmental Record Sources

Environmental Data Resources, Inc. (EDR) was contracted to provide a database search of public lists of sites that generate, store, treat, or dispose of hazardous materials or sites for which a release or incident has occurred. The EDR search was conducted for the subject property and included data

[1] https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf

from surrounding sites within specified radii of the property. A copy of the EDR report, which specifies the ASTM E1527-13 search distance for each public list, is included as Appendix B. As shown on the attached EDR report, federal, state, and county lists were reviewed as part of the research effort. Please refer to Appendix B for a complete listing of sites reported by EDR and a description of the databases reviewed.

The Map Findings Summary, included in the EDR report, provides a summary of the databases searched, the number of reported facilities within the search radii, and whether the facility is located onsite or adjacent to the subject property. The following information is based on our review of the Map Findings Summary and the information contained in the EDR report.

Subject Property

The subject property was listed on the following databases:

- NPDES database as Bordeaux 1 31 in Unincorporated Maricopa, California
- CERS database as Bordeaux 1-31 at north side of Copus Road, ½ mile west of corner of Copus/Old River Road
- HWTS database as Geokinetics at 14046 Copus Road
- WMUDS/SWAT database as Evaporation Basin at Copus Road and Old River Road
- HWTS database as Jakov P Dulcich & Sons LLC at 14720 Copus Road
- HAZNET and HWTS database as JD&K Farm at 14720 Copus Road
- HAZNET and HWTS database as Andrew Agg Inc. at 13533 Copus Road
- HWTS database as Lakeview Baptist Church at 13533 Copus Road

Regulatory agency files reviewed for the subject property are discussed in the Additional Environmental Record Sources section of this report.

Offsite Properties

Offsite properties listed by EDR fall under two general categories of databases: those reporting unauthorized releases of hazardous substances (e.g., Leaking Underground Storage Tank [LUST], National Priority List [a.k.a. Superfund sites], and corrective action facilities), and databases of businesses permitted to use hazardous materials or generate hazardous wastes, for which an unauthorized release has not been reported to a regulatory agency.

Rincon reviewed the EDR Radius Map and select detailed listings to evaluate their potential to impact the subject property, based on the following factors:

- Reported distance of the facility from the subject property;
- The nature of the database on which the facility is listed, and/or whether the facility was listed on a database reporting unauthorized releases of hazardous materials, petroleum products, or hazardous wastes;
- Reported case type (e.g., soil only, failed underground storage tank [UST] test only);
- Reported substance released (e.g., chlorinated solvents, gasoline, metals);
- Reported regulatory agency status (e.g., case closed, “no further action”); and,
- Location of the facility with respect to the reported groundwater flow direction (discussed in the Geology and Hydrogeology section of this report)

Facilities/properties that were interpreted by Rincon to be of potential environmental concern to the subject property, based on one or more of the factors listed above, are summarized in Table 2. In accordance with ASTM E1527-13, contamination migration pathways in soil, groundwater, and soil vapor were considered in our analysis of offsite properties of potential environmental concern.

Table 2 EDR Listing Summary of the Subject Property and Select Sites Within One-Half Mile of the Subject Property

Site Name	EDR Site ID	Site Address	Distance from Subject Property	Database Reference	Comments
Subject Property					
Bordeaux 1-31 /Geokinetics/Evaporation Basin/Jakov P Dulcich & Sons LLC/JD&K Farm/Andrew Agg Inc./Lakeview Baptist Church	A1, A2, 5, 10, D11, D12, E13, E14	North side of Corpus Road, ½ mile west of corner of Copus/ /14046 Copus Road/Copus Road and Old River Road/14720 Copus Road/13533 Copus Road	Subject Property	NPDES	The facility is listed as an active construction storm water permit associated with Grapevine Energy as of 2018.
				CERS	The facility is classified as a chemical storage facility associated with Grapevine Energy.
				HWTS	The facility is classified as general automotive repair.
				WMUDS/SWAT	The facility type is listed as agricultural and the primary waste type is listed as designated/ influent or solid wastes that pose a significant threat to water quality because of their high concentrations. It is listed as a minor threat to water quality and has no reporting requirements.
				HAZNET	The facility disposed of various quantities of hazardous waste in 2006 and 2010, including asbestos-containing waste.
Adjacent Properties					
South Valley Gins Inc. – Lakeview Module Yard	B3, B4	14011 Copus Road	Adjacent Property – South	FINDS	No pertinent information in the EDR report.
				CUPA Listings	The status of the facility is listed as inactive.
Rainbow Ranch Evap Basin/Andrews Ag Inc.	F15-F22	13650 Copus Road	Adjacent Property – North and East	FINDS	No pertinent information in the EDR report.
				CERS TANKS, CERS, AST	The facility is classified as a chemical storage facility, is associated with Waste Discharge Requirements (WDR), and is associated with an AST. Violations have been reported associated with a discharge outside the evaporation basin,

Site Name	EDR Site ID	Site Address	Distance from Subject Property	Database Reference	Comments
					but the facility has since returned to compliance.
				CUPA Listings	The facility is listed as active.
				HWTS	The facility is classified as all other motor vehicle parts manufacturing.
				ECHO	The facility is listed as active under the Resource Recovery Conservation Act (RCRA).
				RCRA NonGen/NLR	The facility as listed as a non-generator of hazardous waste. No violations have been reported.
				ENF	The facility is listed as agricultural, "general farms, primarily crop" that is associated with WDRs. A fine was given to the facility for failing to submit a Waste Management Plan (WMP), which was subsequently completed.
				WDS, CIWQS	The facility is listed as agricultural that treats and/or disposes of the wastes associated with confined and concentrated animal feeding.
PG&E: Lakeview Substation	H29-H31	Copus Road and Schallock Road	Adjacent Property – East	CUPA Listings	The status of the facility is listed as active.
				HAZNET	The facility disposed of various hazardous waste in 2016.
				HWTS	The facility is classified as an electric power distribution.
				FINDS	No pertinent information in the EDR report.

Regulatory agency information reviewed for the listings in the table above are summarized in the Additional Environmental Record Sources section of this report.

Orphan Listings

EDR reported one orphan or unmapped site listing, which EDR is unable to plot due to insufficient address information. Based on Rincon's review of the limited address information or site description for the orphan listing, the listing is not expected to impact the subject property.

Additional Environmental Record Sources

Review of Agency Files

As a follow-up to the database search, Rincon reviewed regulatory information for the subject property and facilities within the specified search radii that were interpreted to have the potential to impact the subject property, based on one or more factors previously discussed (e.g., distance, open case status, upgradient location, soil vapor migration).

The following is a summary of our review of regulatory information obtained from review of online sources (e.g., SWRCB GeoTracker database, Department of Toxic Substances Control [DTSC] EnviroStor database) and/or files requested from the applicable regulatory agency, as described below.

Subject Property

The subject property was listed on the following non-release databases: NPDES, CERS, HWTS, WMUDS/SWAT, and HAZNET databases. The listings indicate that the facility is classified as a chemical storage facility, as a general automotive repair, and disposed of various hazardous waste in 2006 and 2010. The facility is also listed on the Waste Management Unit Database (WMUDS). The listing indicates that the facility type is listed as agricultural and the primary waste type is listed as designated/influent or solid wastes that pose a significant threat to water quality because of their high concentrations. Records regarding the subject property were requested from the Kern County Department of Environmental Health on November 27, 2020. A response has not been received as of the date of this report. The subject property was not listed in the online databases searched.

Adjacent Properties

Three adjacent properties were listed in databases searched by EDR:

- **South Valley Gins Inc. – Lakeview Module Yard at 14011 Copus Road.** This property is located adjacent to the south of the subject property and is listed on the FINDS and CUPA Listings databases. The listings indicate that the status of the facility is inactive. No additional information regarding this property was available in the EDR report or online databases searched. Based on the non-release database listings, this property is not expected to impact the subject property.
- **Rainbow Ranch Evap Basin/Andrews Ag Inc at 13650 Copus Road.** This property is located adjacent to the north and east of the subject property and is listed on the FINDS, CERS TANKS, CERS, AST, CUPA Listings, HWTS, ECHO, RCRA NonGen/NLR, ENF, WDS, and CIWQS databases. The listings indicate that the facility is classified as a chemical storage facility, other motor vehicle parts manufacturing, is associated with a WDR, and is associated with an AST. Violations have been reported associated with a discharge outside of the evaporation pond, but the facility

has since returned to compliance. A fine was given to the facility for failing to submit a WMP. The agricultural facility is also associated with a WDS that treats and/or disposes of the wastes associated with confined and concentrated animal feeding. No additional information regarding the AST was available in the EDR report or online databases searched. Public records regarding the AST were requested on November 25, 2020. As of the date of this report a response has not been received.

- **PG&E: Lakeview Substation at Copus Road and Schallock Road.** This property is located adjacent to the east of the subject property and is listed on CUPA Listings, HAZNET, HWTS, and FINDS databases. The listings indicate that the facility disposed of hazardous waste in 2016 and is classified as an electric power distribution. Based on the non-release database listings, this property is not expected to impact the subject property.

Upgradient Release Sites

None of the nearby or upgradient listed sites are release sites.

Review of State of California Geologic Energy Management Division (CalGEM) Records

A review of the State of California Geologic Energy Management Division (CalGEM) Online Mapping System[2] indicates that a canceled oil and gas well operated by PYR Energy and Corporation and one new oil and gas well (Well ID 1-31 API 0403063655) operated by Grapevine Energy, LLC are located on the southern portion of the subject property. The subject property is located approximately 0.2 mile north of Rio Viejo Oil Field, which is associated with multiple active, idle, and plugged oil and gas wells. No releases have been reported in association with the oil and gas wells.

Review of National Pipeline Mapping System Records

A review of the National Pipeline Mapping System (NPMS) online Public Map Viewer[3] indicates that no natural gas transmission pipelines or hazardous liquid pipelines are located on the subject property or adjacent properties.

Review of California Statewide PFAS Investigation

In 2019, the California SWRCB sent assessment requirements to property owners of sites that may be potential sources of PFAS. These sites currently include select landfills, airports, and chrome plating facilities. According to the SWRCB, "PFAS are a large group of human-made substances that do not occur naturally in the environment and are resistant to heat, water, and oil" (SWRCB 2019).

Our November 23, 2020 review of the California 2019 Statewide PFAS Investigation online Public Map Viewer[4] indicates that there are no current chrome plating, airport, or landfill PFAS orders at any facilities listed as located within one-half mile of the subject property. Additionally, there are no

[2] https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx

[3] https://www.npms.phmsa.dot.gov/PublicViewer/

[4] https://www.waterboards.ca.gov/pfas/

publicly owned treatment works facilities listed as located within one-half mile of the subject property.

Our November 23, 2020 review of the California 2019 Statewide Drinking Water System Quarterly Testing Results online Public Map Viewer indicates that perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were not detected in drinking water wells located within five miles to the northeast of the subject property and tested quarterly as part of a PFAS investigative order.

Because groundwater beneath the subject property is not planned for use onsite, no further assessment of PFAS in groundwater is warranted at this time.

Known or Suspect Contaminated Release Sites with Potential Vapor Migration

The EDR report was reviewed to identify nearby known or suspect contaminated sites that have the potential for contaminated vapor originating from the nearby site to be migrating beneath the subject property. Based on the ASTM E2600-15, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, the following minimum search distances were initially used to determine if contaminated soil vapors from a nearby known or suspect contaminated site have the potential to be migrating beneath the subject property:

- 1/10 mile (528 feet) for petroleum hydrocarbons
- 1/3 mile (1,760 feet) for other contaminants of concern (COCs)

If known or suspect contaminated sites are located within the above referenced distances from the subject property, online resources are reviewed to determine the extent of the contaminated plume at those sites. The following describes search distances for contaminated plumes of petroleum hydrocarbons (30 feet from the subject property) and other COCs (100 feet from the subject property). Per ASTM E2600-15, vapors associated with impacted soil or groundwater present within these distances have the potential to migrate beneath the subject property.

Petroleum Hydrocarbons

Based on our review of the EDR report, no releases on the subject property or adjacent properties have the potential to have petroleum hydrocarbon-impacted soil vapor migrating beneath the subject property.

However, based on our review of the EDR report, known or suspect release sites identified within 1/10 mile of the subject property are as follows:

- One adjacent suspect release site (13650 Copus Road – AndrewsAg Inc)

Based on a review of aerial photographs, the AST at 13650 Copus Road is located greater than 200 feet from the subject property. Based on the distance to the subject property, this suspect release site does not have the potential to have petroleum hydrocarbon-impacted soil or groundwater plumes located within 30 feet of the subject property.

Other COCs

Based on our review of the EDR report, there are no known or suspect sites contaminated with other COCs within 1,760 feet of the subject property. Therefore, per ASTM E2600-15, as this distance exceeds the 100-foot distance considered the critical distance wherein such migration may pose a threat to the subject property, there are no potential threats to the subject property posed by the potential migration of other COC vapors from listed sites.

Historical Use Information on the Property and the Adjoining Properties

The historical records review completed for this Phase I ESA includes aerial photographs and topographic maps as detailed in the following sections. Copies of the historical resources reviewed are included in Appendix C.

Review of Aerial Photographs

Aerial photographs from EDR's aerial photograph collection were obtained. In addition, a current aerial from Google Earth was reviewed. The aerial photographs were reviewed on November 5, 2020.

Review of Historical Topographic Maps

Historical topographic maps from EDR's map collection were obtained. The historical topographic maps were reviewed on November 5, 2020.

Review of City Directory Listings

City directories were not included as part of this Phase I ESA.

Review of Fire Insurance Maps

Fire insurance maps were not included as part of this Phase I ESA.

Review of Kern County Building Permit Records

Based on the sufficient amount of information obtained from the above sources, building permit records were not reviewed.

Other Historical Sources

Based on the historical information obtained, no additional historical sources were reviewed.

Summary of Historical Uses

Subject Property

Based on our review of the documents listed above, it appears that the subject property was developed with the following:

- 1910 and 1912: Undeveloped land
- 1933/1934: Undeveloped land with a north-south trending unpaved road

- 1937 and 1946: Tilled agricultural land on the southern portion and undeveloped land on the northern portion
- 1950: Vacant land with a north-south trending unpaved road
- 1955: Seven structures in the southwest corner and agricultural ponds at the northern property boundary and southeast property boundary, and an east-west trending unpaved road, but otherwise vacant land
- 1956: Agricultural land (row crops), seven structures in the southwest corner, and agricultural ponds at the northern boundary, southeastern, and northeastern property boundaries
- 1967, 1968, and 1973: Similar to 1956; however, an additional residential structure is present south of Copus Road on the eastern portion
- 1989 1994, and 2005: Agricultural land (row crops) on the southern portion and fallow agricultural on the northern portion with agricultural ponds
- 2009: Vacant land except for row crops on the eastern portion south of Copus Road
- 2012 and 2016: Row crop circles, an agricultural pond in the central portion, and vacant land
- Present day: Tilled agricultural fields, an agricultural pond in the central portion, and vacant land (existing configuration)

Northern Adjacent Properties

Based on our review of the documents listed above, it appears that the northern adjacent properties were developed with the following:

- 1910 and 1912: Undeveloped land
- 1933/1934 and 1937: Undeveloped land
- 1946: A road and tilled agricultural land
- 1950: Vacant land and an unpaved road followed by vacant land
- 1955: Unpaved roads followed by a well and vacant land
- 1956 and 1967: A road and agricultural land (row crops) and three structures
- 1968: Unpaved roads followed by a well and vacant land
- 1973 and 1989: A road and agricultural land (row crops) and three structures
- 1994: A road and agricultural land and two structures
- 2005, 2009, and 2012: A road, agricultural land, cleared, vacant land, and three building pads
- 2016: A road, agricultural land, cleared, vacant land, three building pads, and a debris pile
- Present day: One trailer, a road, agricultural land, a building pad, and a debris pile

Eastern Adjacent Properties

Based on our review of the documents listed above, it appears that the eastern adjacent properties were developed with the following:

- 1910 and 1912: A road followed by undeveloped land
- 1933/1934 and 1937: A road followed by undeveloped land
- 1946: A road followed by two structures and undeveloped land
- 1950: A road followed by undeveloped land
- 1955: A road (Old River Road) followed by 19 structures and vacant land

- 1956 and 1967: Old River Road followed by four commercial structures, at least 12 residential structures, a park, and agricultural land and an electrical substation
- 1968: Old River Road followed by three commercial structures, 12 residential structures, a park, and agricultural land
- 1973: Old River Road followed by six commercial structures, eight residential structures, a park, and agricultural land and an electrical substation
- 1989 and 1994: Old River Road followed by at least six commercial structures and agricultural land and an electrical substation
- 2005, 2009, 2012, 2016, and present day: Old River Road followed by at least seven commercial structures and agricultural land and an electrical substation (existing configuration)

Southern Adjacent Properties

Based on our review of the documents listed above, it appears that the southern adjacent properties were developed with the following:

- 1910 and 1912: A road followed by undeveloped land
- 1933/1934 and 1937: A road followed by undeveloped land
- 1946: A road followed by agricultural land and at least two structures
- 1950: A road (Copus Road) followed by vacant land
- 1955: Copus Road followed by vacant land, at least seven structures, and a pond
- 1956 and 1967: Copus Road followed by at least six structures, a pond, and agricultural land (row crops)
- 1968 and 1973: Copus Road followed by at least three structures, three ponds, and agricultural land
- 1989, 1994, 2005, and 2009: Copus Road followed by at least three structures, one pond, and agricultural land
- 2012, 2016, and present day: Copus Road followed by at least three structures and agricultural land (existing configuration)

Western Adjacent Properties

Based on our review of the documents listed above, it appears that the western adjacent properties were developed with the following:

- 1910, 1912, 1931, 1933/34, and 1937: Undeveloped land
- 1946: Agricultural land (row crops)
- 1955: Unpaved road followed by a pond, vacant land, two structures, and two grain tanks
- 1956 and 1967: An unpaved road followed by agricultural land and a pond
- 1968 and 1973: An unpaved road followed by vacant land, ponds, three structures, and two grain tanks
- 1973, 1989, 1994, 2005, 2009, 2012, 2016, and present day: Agricultural land and ponds (existing configuration)

Gaps in Historical Sources

Several gaps of greater than five years were identified in the historical records reviewed, from 1912 to 1931, from 1937 to 1946, from 1956 to 1967, from 1973 to 1989, and from 1994 to 2005. These gaps are considered insignificant because the subject property use appears to be similar prior to and following the gaps.

Interviews

Rincon performed interviews regarding the subject property and surrounding areas. The purpose of the interviews was to discuss current and historical conditions and to obtain information indicating the presence of RECs in connection with the subject property.

Interview with Owner

An interview questionnaire was provided to the property owner of Maricopa Ochards prior to the site reconnaissance. Jon Reiter of Maricopa Orchards completed the Owner Questionnaire on December 10, 2020. A copy of the completed questionnaire is included in Appendix A. The following information is based on our review of the completed questionnaire.

Mr. Reiter indicated the following:

- The subject property was formerly and is currently used for agricultural purposes (farm, row crops, or fallowed land).
- The northern adjacent properties were formerly and are currently used for agricultural purposes.
- The eastern adjacent properties were formerly and are currently used for agricultural purposes.
- The southern adjacent properties were formerly and are currently used for agricultural purposes.
- The western adjacent properties were formerly and are currently used for agricultural purposes.
- The former owner of the subject property was Andrews Ag.

The property owner also presented the following information regarding hazardous material and petroleum hydrocarbon storage and waste generation at the subject property.

- Legally permissible pesticides and herbicides are stored at the subject property
- Agricultural water discharge is generated at the subject property

The property owner indicated that he is unaware of the presence of industrial drums, storage tanks (above or below ground), fill dirt, pits, ponds, lagoons, sumps, clarifiers, solvent degreasers, stained soil, vent pipes, fill pipes, or access ways, stained surfaces, private wells, non-public water systems, capacitors, or hydraulic equipment, records indicating the presence of polychlorinated biphenyls, or records indicating the presence of pesticides or herbicides at the subject property.

The property owner indicated that he is not aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property. In addition, he is not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products at the subject property.

An interview questionnaire was provided to the property owner prior to the site reconnaissance. Felix Echevveria completed the Owner Questionnaire on December 7, 2020. A copy of the completed questionnaire is included in Appendix A. The following information is based on our review of the completed questionnaire.

Mr. Echevveria indicated the following:

- The subject property was formerly and is currently used for agricultural purposes (growing alfalfa hay, wheat, and Sudan).
- The northern adjacent properties were formerly and are currently used for agricultural purposes.
- The eastern adjacent properties were formerly and are currently used for agricultural purposes.
- The southern adjacent properties were formerly and are currently used for agricultural purposes.
- The western adjacent properties were formerly and are currently used for agricultural purposes.
- Felix and Isabelle Echevveria and John and Angela Echevveria obtained ownership of the subject property in 2011.
- The former owner of the subject property was Maricopa Orchards.
- There are no hazardous materials or petroleum products stored or used on the subject property.
- No hazardous wastes are generated at the subject property.

The property owner indicated that he is unaware of the presence of industrial drums, storage tanks (above or below ground), fill dirt, pits, ponds, lagoons, sumps, clarifiers, solvent degreasers, stained soil, vent pipes, fill pipes, or access ways, stained surfaces, private wells, non-public water systems, transformers, capacitors, or hydraulic equipment, records indicating the presence of polychlorinated biphenyls, or records indicating the presence of pesticides or herbicides at the subject property.

The property owner indicated that he is not aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property. In addition, he is not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products at the subject property.

Interview with Site Manager

A site manager was not identified to Rincon.

Interviews with Occupants

Because the onsite residence is currently unoccupied, no occupants were interviewed as part of this research effort.

Interviews with Local Government Officials

Rincon contacted the following agencies for records pertaining to the subject property and/or adjacent properties:

- **Kern County Department of Environmental Health –** Public records regarding the AST at the eastern adjacent property (13650 Copus Road) were requested on November 25, 2020. A follow-up email request was sent on August 20, 2021. A response email pertaining to the AST was received on August 24, 2021 and indicated no records were available.

Interviews with Others

Rincon did not attempt to interview neighboring property owners or others as part of this Phase I ESA.

Site Reconnaissance

Rincon performed an unaccompanied reconnaissance of the subject property on November 20, 2020. The purpose of the reconnaissance was to observe existing subject property conditions and to obtain information indicating the presence of RECs in connection with the subject property.

Methodology and Limiting Conditions

The site reconnaissance was conducted by:

1. Observing the subject property from public thoroughfares,
2. Observing the adjacent properties from public thoroughfares,
3. Observing the subject property from driveways, dirt roads, and walking paths.

Current Use of the Property and Adjacent Properties

The subject property is currently in use for agricultural purposes and as Grapevine Energy LLC "Bordeaux" facility associated with the onsite oil and gas well. Adjacent properties include agricultural land, Lakeview PG&E Substation, and a residence.

Past Use of the Property and Adjacent Properties

Based on our site reconnaissance, past uses at the subject property and adjacent properties are not readily apparent.

Current or Past Uses in the Surrounding Areas

The subject property is surrounded by agricultural, commercial, and residential land uses as detailed in the Site Description section of this report. Past uses of the surrounding area are not readily apparent based on the site reconnaissance,

Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Geologic, hydrogeologic, hydrologic, and topographic information are as previously stated in the Physical Settings Section of this report.

General Description of Structures

Grapevine Energy Bordeaux Facility was observed on the subject property.

Roads

Copus Road is located adjacent to the south of the subject property and Old River Road is located adjacent to the east of the subject property.

Potable Water Supply

Kern County Water Agency currently supplies potable water to the subject property.

Sewage Disposal System

No sewage disposal system is located at the subject property.

Interior and/or Exterior Observations

Hazardous Substances and Petroleum Products in Connection with Identified Uses

Small quantities of various hazardous substances and petroleum products observed during the site reconnaissance are as follows:

- Two ASTs containing corrosion inhibitor (assumed for use for water treatment)
- Two diesel ASTs associated with onsite water pumps
- One diesel AST associated with the Grapevine Energy LLC "Bordeaux" facility

Storage Tanks

During the site reconnaissance, we observed the three diesel ASTs and two corrosion inhibitor ASTs described above on the subject property. One of the ASTs associated with a water pump was observed to be leaking; however, the leak appeared to be minor. No other above-ground or below-ground tanks were reported by the subject property representative or observed during the site reconnaissance. Rincon did not observe indications of releases from the other tanks on the subject property.

Odors

During the site reconnaissance, Rincon did not identify any strong, pungent, or noxious odors.

Pools of Liquid

During the site reconnaissance, no pools of liquid were observed.

Drums

During the site reconnaissance, no drums were observed on the subject property.

Hazardous Substances and Petroleum Products Containers Not in Connection with Identified Uses

No hazardous substances or petroleum products not in connection with identified uses were observed at the subject property.

Unidentified Substance Containers

No unidentified substance containers or unidentified containers that might contain hazardous substances were observed during the site reconnaissance.

Indications of Polychlorinated Biphenyls (PCBs)

Rincon did not observe indications of PCBs on the subject property during the site reconnaissance.

Other Conditions of Concern

During the site reconnaissance, Rincon did not note any of the following:

- Stains or corrosion
- Clarifiers and sumps
- Degreasers/parts washers
- Pools of liquid
- Stained soil or stained pavement
- Stressed vegetation

Pits, Ponds, and Lagoons/Wastewater. Two ponds used for agricultural purposes were observed on the subject property.

Solid Waste/Debris. A trash pile was observed on the southwestern portion of the subject property and abandoned tires were observed in the western portion of the subject property.

Wells. An oil and gas well was observed in the Grapevine Energy Bordeaux Facility in the southern portion of the subject property.

Evaluation

Findings

Known or suspect RECs associated with the subject property include the following:

A. Subject property listing as an automotive repair facility
B. Former agricultural use of the subject property and adjacent properties
C. Onsite oil and gas well
D. Onsite ASTs
E. Onsite agricultural ponds
F. AST present at the northern and eastern adjacent property

Opinions

A. **Subject property listing as an automotive repair facility.** According to the EDR report, the subject property was listed on a database indicating that the facility is classified as general automotive repair. However, the historical resources reviewed do not indicate the subject property use as general automotive repair. Therefore, the subject property listing as an automotive repair facility is considered *de minimis*.

B. **Former agricultural use of the subject property and adjacent properties**. According to the historical resources reviewed, the subject property and adjacent properties appear to have been used for agricultural purposes as early as 1946 through present day. Agriculture is typically associated with the use of pesticides, herbicides, insecticides, and arsenic. The legal and common application of such chemicals typically associated with historical agricultural uses may result in those compounds being present in soil and/or groundwater. Information regarding the possible historical use of herbicides and pesticides on the subject property was not available during this assessment. Therefore, if such chemicals were used and applied to land consistent with their intended use, this application is not considered a release and any residual environmental impact is exempt from CERCLA liability if the property remains used for agricultural or non-residential purposes. It is Rincon's understanding that the subject property will be redeveloped as a solar facility and no soil will be transported offsite. As such, the historical use of the subject parcel for agricultural purposes (row crops) is not a REC associated with the subject parcel and is therefore considered *de minimis*.

C. **Onsite oil and gas well**. According to resources reviewed, indicates that a new oil and gas well (Well ID 1-31 API 0403063655) operated by Grapevine Energy, LLC is located on the southern portion of the subject property. The new oil and gas well was observed in the Grapevine Energy Bordeaux Facility in the southern portion of the subject property during the site reconnaissance. No releases have been reported regarding the oil and gas welland therefore, the onsite oil and gas well is considered *de minimis*.

D. **Onsite ASTs.** During the site reconnaissance, three diesel fuel ASTs and two corrosion inhibitor ASTs were observed on the subject property. No indications of release were noted from the diesel or corrosion inhibitor tanks. One of the diesel ASTs associated with the water pump was

observed to have a minor leak. However, based on the conditions of the tanks and minor nature of the release from one of the ASTs , the onsite ASTs are considered a *de minimis*.

E. **Onsite agricultural ponds.** During the site reconnaissance, two agricultural ponds were observed on the subject property. Agricultural ponds are typically associated with pesticides, arsenic, and selenium. Based on email correspondence from Christine Lan, Project Manager for Idemitsu Renewables, dated May 3, 2022, Ms. Lan indicated that the planned development of the subject property will avoidagricultural pond #1 but will fill and construct above agricultural pond #2 in order to expand the existing PG&E Lakeview Substation. There is potential for exposure of construction workers to the agricultural ponds, therefore, the onsite agricultural ponds are considered a REC.

F. **AST present at the northern and eastern adjacent property.** According to the EDR report, the northern and eastern adjacent property at 13650 Copus Road is associated with an AST. No other information was available in the EDR report. A records request regarding the AST was requested from Kern County were requested on November 25, 2020. No releases regarding the AST have been reported. Based on our review of the aerial photographs, the AST appears to be greater than 200 feet from the property boundary. Based on the distance to the subject property and lack of identified releases, the AST on the northern and eastern adjacent property is considered *de minimis.*

Conclusions & Recommendations

Rincon has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 for the subject property located in Kern County, California. Any exceptions to, or deletions from, this practice are described in the Deviations section of this report.

This assessment has revealed evidence of one REC in connection with the subject property:

- Onsite agricultural ponds

Rincon recommends that soil sampling be conducted to assess the potential risk to onsite construction workers.

Deviations

Deviations from ASTM E1527-13 practice were not encountered during the completion of this Phase I ESA. In addition, a lien search was not completed as part of this assessment; however, one was requested from the user.

References

The following reference materials were used in preparation of this Phase I ESA:

Aerial Photographs

Photos provided by Environmental Data Resources, Inc. (EDR) on November 5, 2020.

Environmental Database

EDR report dated October 29, 2020.

Geology

California Geologic Survey (CGS), *California Geomorphic Provinces Note 36*, December 2002. Accessed November 23, 2020;

Geologic map of California: Bakersfield sheet, Smith, 1964.

Groundwater

California Natural Resources Agency, California Department of Water Resources, *California Groundwater Bulletin 118*, 2003, https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118. Accessed November 23, 2020;

RWQCB online database (GeoTracker), http://geotracker.waterboards.ca.gov/. Accessed November 23, 2020.

Historical Topographic Maps

Maps provided by EDR on October 29, 2020.

Oil and Gas Records

State of California Department of Conservation Geologic Energy Management Division (CalGEM, formerly DOGGR) website: https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx. Accessed November 23, 2020.

PFAS (Per- and Polyfluoroalkyl Substances)

California State Water Resources Control Board (SWRCB) online 2019 Statewide PFAS Investigation online Public Map Viewer: https://www.waterboards.ca.gov/pfas/. Accessed November 23, 2020.

Pipelines

National Pipeline Mapping System (NPMS) Public Map Viewer: https://www.npms.phmsa.dot.gov/PublicViewer/. Accessed November 23, 2020.

Topography

USGS topographic map (Coal Oil Canyon Quadrangle, 2018).

Signatures of Environmental Professionals

The qualified environmental professionals that are responsible for preparing the report include Walt Hamann and Lisa Bestard. Their qualifications are summarized in the following section.

"We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."



Signature	May 4, 2022 Date
Ryan Thacher, PhD, PE Name	Director Title



Signature	May 4, 2022 Date
Lisa Bestard Name	Senior Environmental Scientist Title

Qualifications of Environmental Consultants

The environmental consultants responsible for conducting this Phase I ESA and preparing the report include Walt Hamann, Lisa Bestard, and Amanda Duval. Their qualifications are summarized below.

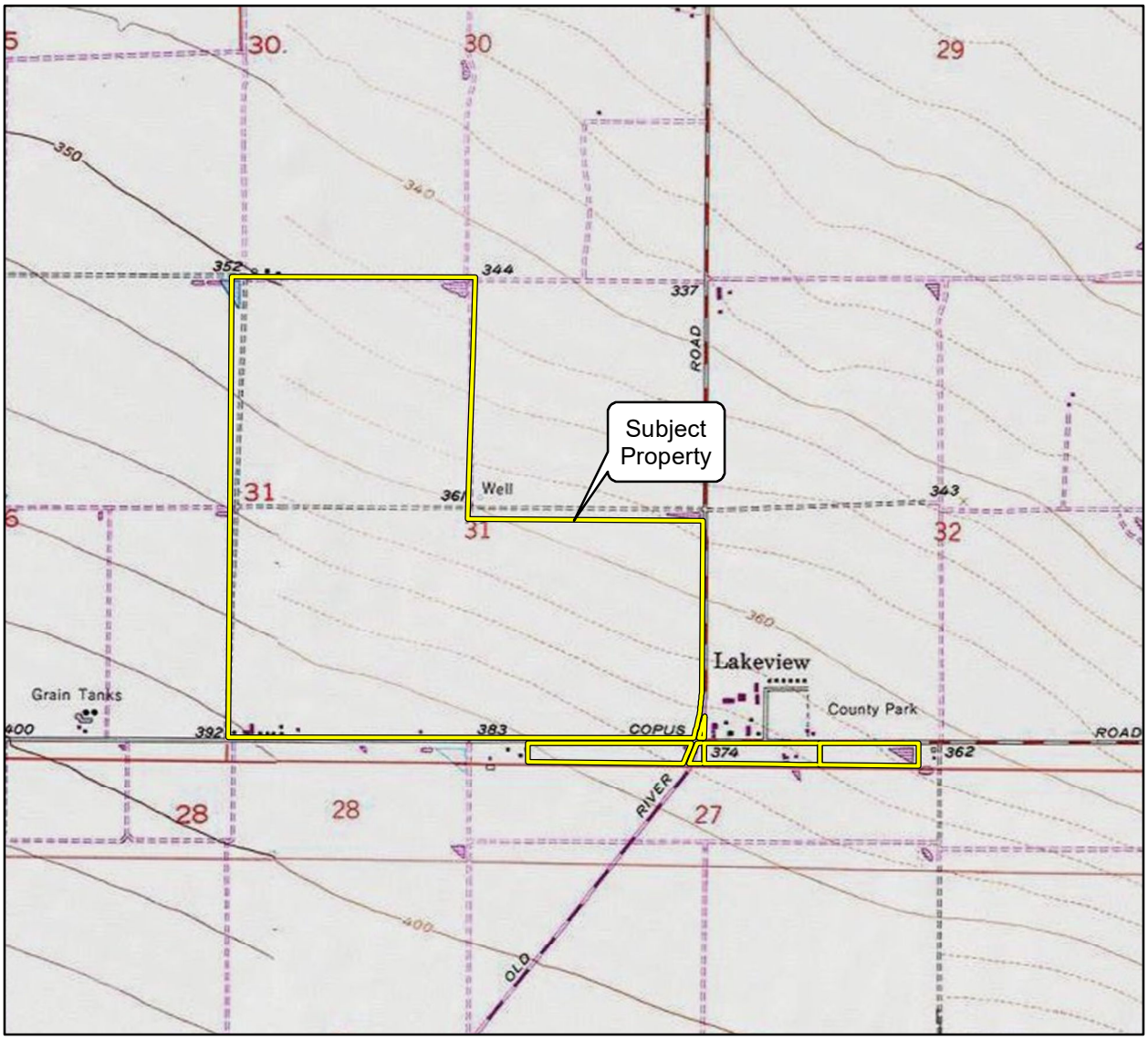
Environmental Professional Qualifications	X2.1.1 (2) (i) - Professional Engineer or Professional Geologist License or Registration, and 3 years of full-time relevant experience	X2.1.1 (2) (ii) - Licensed or certified by the Federal Government, State, Tribe, or U.S. Territory to perform environmental inquiries	X2.1.1 (2) (iii) – Baccalaureate or Higher Degree from and accredited institution of higher education in a discipline of engineering or science and the equivalent of 5 years of full-time relevant experience	X2.1.1 (2) (iii) – Equivalent of 10 years of full-time relevant experience
Ryan Thacher	PE		PhD Environmental Engineering	12 years
Lisa Bestard			BA Biology	20 years
Amanda Duval			BS Earth Science	2 years

Dr. Ryan Thacher, PE, is a Director of Site Assessment and Remediation with Rincon Consultants. He holds a Bachelor of Science degree in Chemical Engineering from the University of California, Santa Barbara and a Doctorate degree in Environmental Engineering from the University of Southern California. He has 12 years of experience conducting research related to chemical contaminant fate and transport in soil and groundwater and developing and implementing site assessments and remediation for contaminated sites in California, including the preparation of Phase I and Phase II Environmental Site Assessments. Dr. Thacher is a Professional Engineer (#87757) with the State of California.

Lisa Bestard is a Senior Environmental Scientist with Rincon Consultants. She holds a Bachelor of Arts degree in biology from University of San Diego, San Diego, California. Ms. Bestard has extensive experience performing Due Diligence Phase I and Phase II Environmental Site Assessments and various remediation projects and providing soil and waste management services. She has 18 years of experience conducting research, assessment, and remediation projects in California. Ms. Bestard's responsibilities at Rincon include implementation of site assessments and development of site remediation programs within the Environmental Site Assessment and Remediation Group.

Amanda Duval is an Environmental Scientist with Rincon Consultants. She holds a Bachelor of Science degree in Earth Science from the University of California, San Diego. Ms. Duval's responsibilities at Rincon include implementation of Phase I Environmental Site Assessment reports for a variety of commercial, rural, and industrial properties. She also has experience with Phase II Environmental Site Assessments, which involve soil, groundwater, and soil vapor assessments.

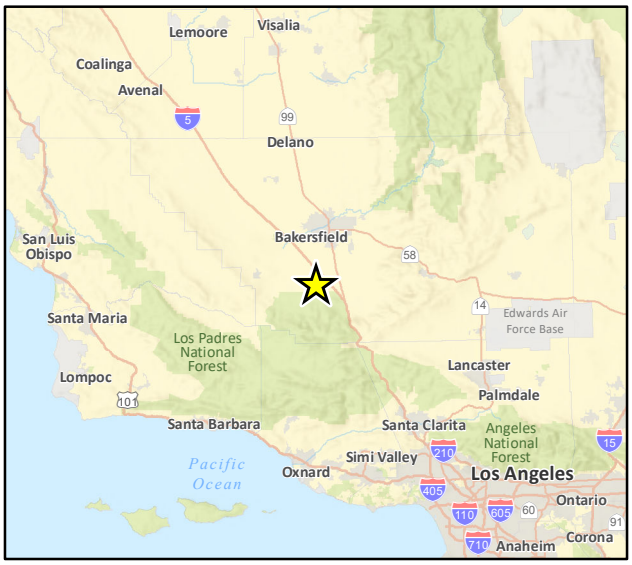
Figures



Imagery provided by National Geographic Society, Esri and its licensors © 2020. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

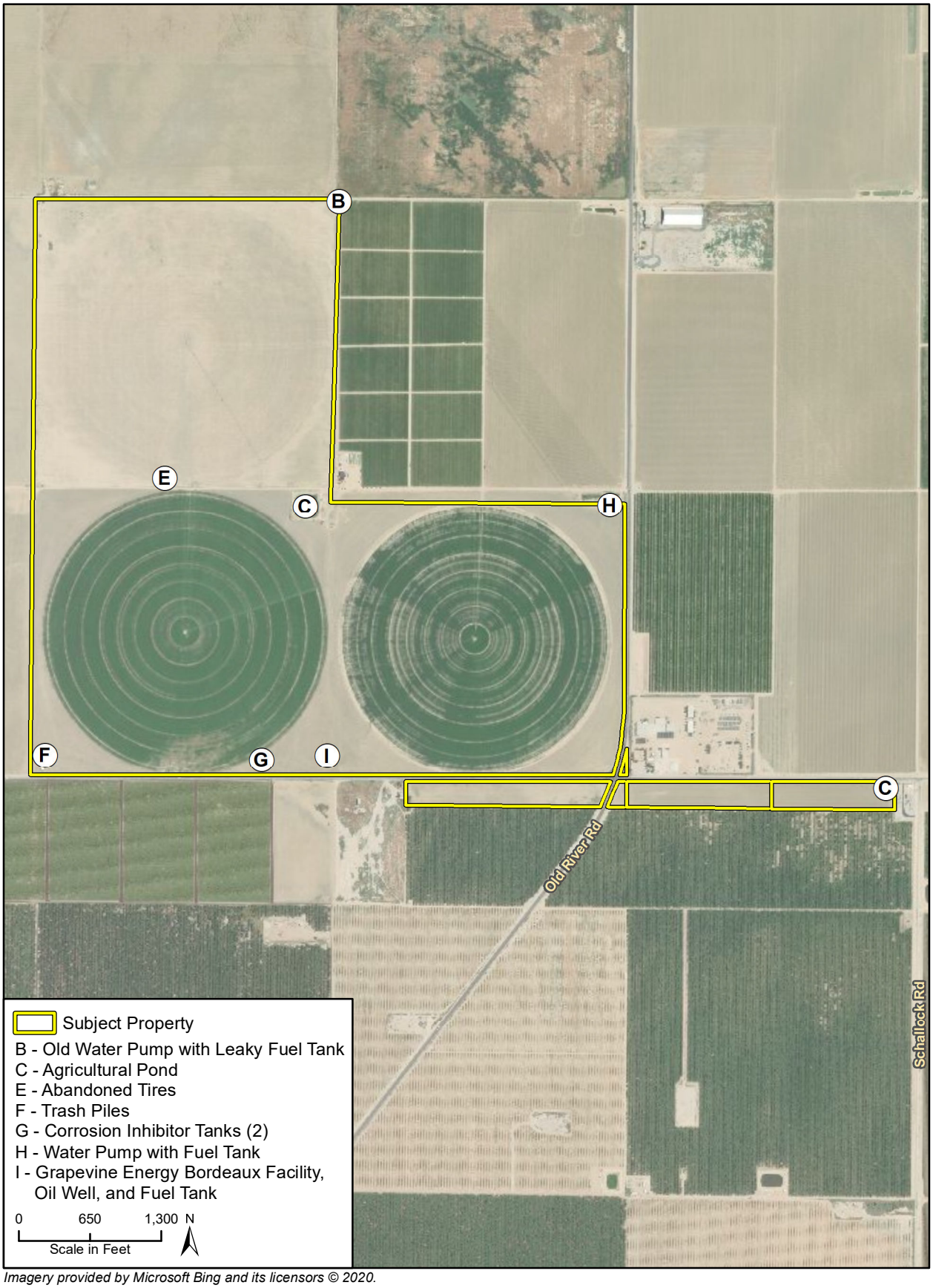
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Scale in Feet

N



Vicinity Map

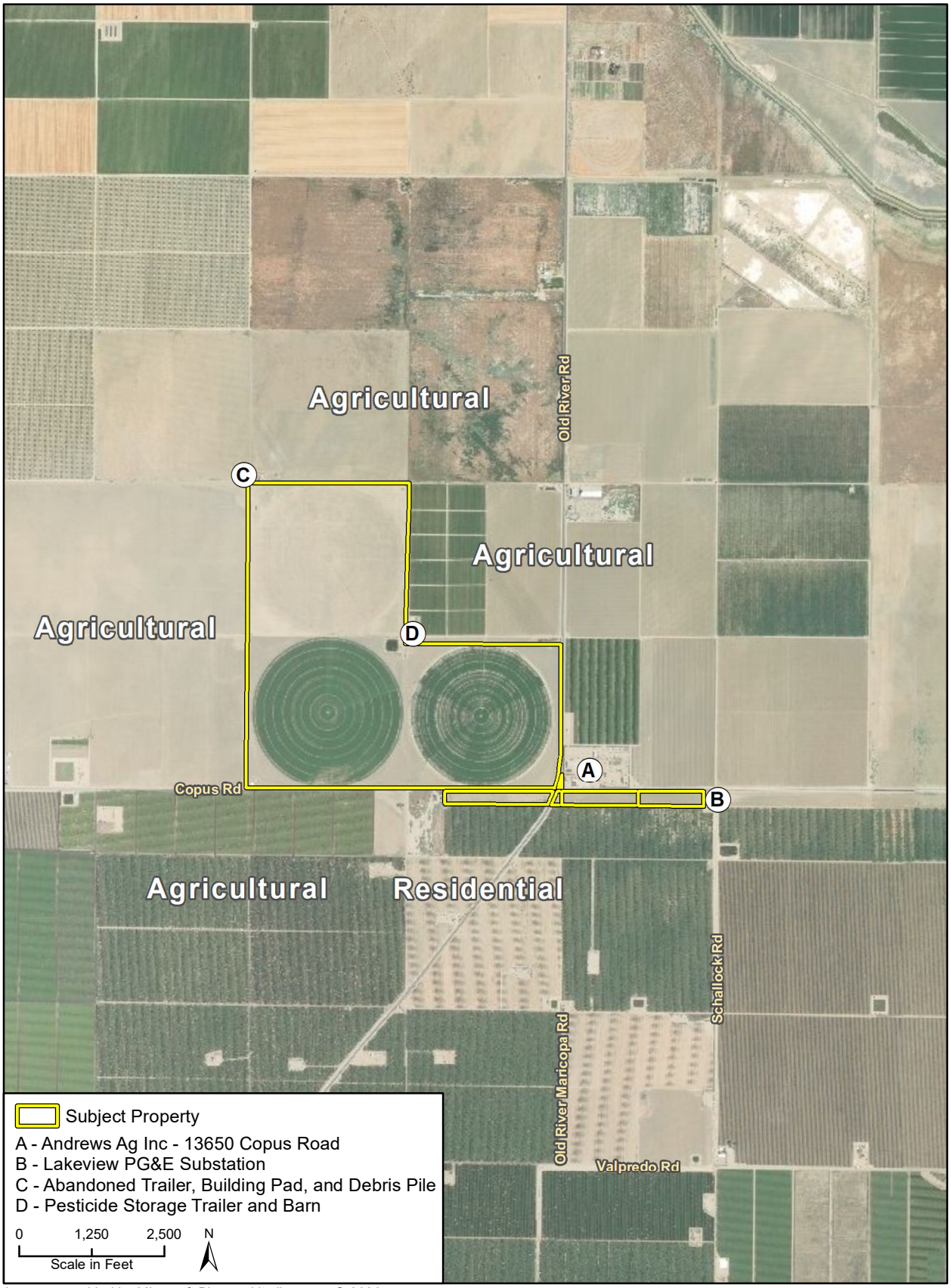
Figure 1



Imagery provided by Microsoft Bing and its licensors © 2020.

Site Map

Figure 2



Imagery provided by Microsoft Bing and its licensors © 2020.

Adjacent Land Use Map

Figure 3



Photograph 1. View of the agricultural pond in the southeastern corner of the subject property, facing east. The eastern adjacent PG&E Lakeview Substation is visible in the background.



Photograph 2. View of the agricultural pond in the southeastern corner of the subject property and the southeastern portion of the subject property, facing west.



Photograph 3. View of the western adjacent residential property located west of the portion of the subject property south of Copus Road, facing southwest.



Photograph 4. View of the subject property and eastern adjacent agricultural facility, facing northwest.



Photograph 5. View of a water pump and corroded fuel tank located in the northern portion of the subject property, facing north. The fuel tank was observed to be leaking.



Photograph 6. View of the northwestern boundary of the subject property, facing north.



Photograph 7. View of the agricultural pond near the center of the subject property, facing southwest.



Photograph 8. View of the northern adjacent agricultural equipment storage area, facing northwest.



Photograph 9. View of the northern adjacent pesticide storage trailer in an agricultural equipment storage area.



Photograph 10. View of two tanks of corrosion inhibitor located on the southern portion of the subject property, facing south.



Photograph 11. View of the onsite Grapevine Energy LLC "Bordeaux" facility with an oil well enclosure and fuel tank located in the southern portion of the subject property, facing north.



Photograph 12. View of row crop circles on the subject property, facing southeast.

Appendix A

Interview Documentation

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Property Owner Interview Questionnaire

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

This questionnaire should be completed by the current property owner or a designated representative of the current property owner. We respectfully request that you fill out and return this form via fax at (760) 918-9444 or email to us at LRoenicke@rinconconsultants.com within one week from the date of this transmittal.

---

1. Was the subject property or any adjoining property ever used as:

- ☐ an airport
- ☐ a fire training area
- ☐ a gasoline or other fueling station
- ☐ a motor vehicle repair facility
- ☐ a commercial printing facility
- ☐ a dry cleaners
- ☐ a photo developing laboratory
- ☐ a metal plating facility
- ☒ a farm
- ☐ a Department of Defense facility or training area
- ☐ a junkyard or landfill
- ☐ a waste treatment, storage, disposal, processing or recycling facility
- ☐ a machine shop
- ☐ a manufacturing facility
- ☐ an oil production facility (including oil wells)
- ☐ any other industrial use

Please check all that apply above and describe:

2. Please describe the current land uses of the subject property and those surrounding your property. Please indicate all businesses/companies located on property.

2a. Current Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	Growing Alfalafa hay, wheat and Sudan

2b. Current Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	Almond trees and grape vineyards

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

2c. Current Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming, equipment storage

2d. Current Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming Crops

2e. Current Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming Crops

3. Please describe the previous land uses of your property and those surrounding your property. Include property ownership and dates of operation if known.

3a. Previous Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming crops

3b. Previous Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming crops

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

3c. Previous Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming crops

3d. Previous Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming crops

3e. Previous Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Farming crops

4. Who is the current owner of the property?

Felix & Isabelle Echeverria and John (Juan) & Angela Echeverria

5. When did current ownership begin?

2011

6. What is the age of the on-site facility?

Open farm ground, no buildings

7. Who is the previous owner of the property?

Maricopa Orchards

8. Please indicate the property's current:

Electrical service provider	PG&E
Natural Gas service provider	None
Water service provider	Wells
Sewer service provider	None
Solid waste hauler	None

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

9. **To the best of your knowledge, has your facility previously or does your facility currently store or use any of the following in individual containers larger than 5 gallons in volume or 50 gallons in the aggregate? (if Yes or Unknown, include how many, type, and size)**

☐ Damaged or discarded automotive or industrial batteries	No
☐ Paints	No
☐ Oils or solvents	No
☐ Motor vehicle fleet	No
☐ Pesticides or herbicides	No
☐ Other chemicals or hazardous substances	No

10. **Please indicate any wastes generated at the facility:**

Hazardous Waste	Quantity	Disposal Method
None		

11. **Are there currently or to the best of your knowledge have there been previously, any industrial drums (typically 55 gallon) or sacks of chemicals located on the property or at the facility?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

12. **Are there currently or to the best of your knowledge have there been previously, any evidence of fill dirt having been brought onto the property that originated from a contaminated site or that is of an unknown origin?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

13. **Are there currently or to the best of your knowledge have there been previously, any pits, ponds or lagoons located on the property in connection with waste treatment or waste disposal?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

14. **Are there currently or to the best of your knowledge have there been previously, any sumps, clarifiers, or solvent degreasers on the property?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

15. **Are there currently or to the best of your knowledge have there been previously, any stained soil on the property?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

16. **Are there currently or to the best of your knowledge have there been previously, any storage tanks (above or below ground) located on the property?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

17. **Are there currently or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways (etc.) indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

18. **If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government agency?**

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

19. Are there currently or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water, or are emitting foul odors?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

20. To the best of your knowledge has your facility previously or does your facility currently, discharge wastewater on or adjacent to the property other than storm water into a sanitary sewer system?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

21. Have any of the following ever been dumped above grade, buried and/or burned on the property? (please check all that apply and describe if possible)

☐ Hazardous substances	No
☐ Petroleum products	No
☐ Unidentified waste materials	No
☐ Tires	No
☐ Automotive or industrial batteries	No
☐ Other waste materials (please describe)	No

22. Are there currently or to the best of your knowledge have there been previously, a transformer, capacitor or any hydraulic equipment on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

23. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of PCBs?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

24. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of pesticides or herbicides?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

25. Do you have any knowledge of environmental liens that may have been recorded against the property or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

26. Do you have any knowledge of activity and use limitations (AULs) such as engineering controls, deed restrictions, land use restrictions, or institutional controls that may have been recorded against the property?

☒ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe: Land is under Williamson Act

27. Have you been informed of the past or current existence of hazardous substances, petroleum products, or environmental violations with respect to the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

28. Do you have any knowledge of any environmental site assessments of the property or facility?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

29. Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release of any hazardous substances or petroleum products involving the property by any owner or occupant of the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

30. Are there any site-specific geotechnical or geologic reports available for the subject property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

31. Is there a Title Report available for the subject property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

This questionnaire was completed by (please print)

Name: Felix Echeverria

Title:

Firm:

Street Address: 13441 Eberle Rd.

City, State, Zip Code: Bakersfield CA 93313

Phone Number: 661 343 0405

Fax Number: 833 816 5762

What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, consultant, etc.)? Owner

Copies of the completed questionnaire should be faxed, emailed (preferably) or mailed to:

Rincon Consultants, Inc.
Attention: Environmental Site Assessment Division
2215 Faraday Avenue, Suite A
Carlsbad, CA 92008
Fax: (760) 918-9444
Email: LRoenicke@rinconconsultants.com

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.

Signature Felix Echeverria Date 12/7/2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

User Questionnaire

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

To qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

We respectfully request that you fill out this form and email it to Lauren Roenicke at LRoenicke@Rinconconsultants.com within one week from the date of this transmittal.

Project Description

1. **Why is the Phase I ESA required or being performed?**

   Requirement by Kern County for Conditional Use Permit/CEQA EIR

2. **What type of property transaction is planned? (i.e. sale, purchase, exchange)**

   Purchase of APNs 295-130-36, 295-130-80 and lease of APN 295-130-78

3. **What is the entire site address?**

   Site does not yet have an address assigned. Properties are located at intersection of Old River Rd. & Copus Rd.

4. **What is the Assessor's Parcel Number(s)?**

   295-130-36, 295-130-80, 295-130-78

5. **Are any considerations beyond the requirements of Practice E1527 to be considered? (i.e. lien search, asbestos & lead based paint, radon)**

   No

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

6. **Identify all parties who will rely on the Phase I report.**

Kern County, SF Jasmine LLC

7. **Identify the Site Manager/Contact and how the contact can be reached.**

Rob Fanucchi – (661) 619-4103

8. **Identify the Site Owner and how the owner can be reached.**

Felix Echeverria - 295-130-78 landowner - (661) 343-0405

9. **Do you have copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning any other knowledge or experience with the property that may be pertinent to the environmental professional (i.e. lien search, title report, chain of title, previous Ph Iand II ESAs, Environmental Impact Studies)?**

Yes, title reports (attached)

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

Subject Property Information

1. **Did a search of recorded land title records (or judicial records, where appropriate) identify any environmental liens filed or recorded against the property?**

Please mark the box with the most appropriate response:

- ☐ I **have not** reviewed the records and **do not know** if there are any filed or recorded environmental liens.
- ■ I **have** reviewed the records, and **No, there aren't any** filed or recorded environmental liens.
- ☐ I **have** reviewed the records, and **Yes, there are** environmental liens. Explain:

2. **Did a search of recorded land title records (or judicial records, where appropriate) identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?**

Please mark the box with the most appropriate response:

- ■ I **have not** reviewed the records and **do not know** if there are any filed/recorded AULs or any AULs in place at the site.
- ☐ I **have** reviewed the records, and **No, there aren't any** filed/recorded AULs or any AULs in place at the site.
- ☐ I **have** reviewed the records, and **Yes, there are** AULs filed, recorded, and/or in place at the site. Explain:

3. **Does the Title Report provide any information pertaining to environmental cleanup liens or activity and use limitations (AULs) for the subject property?**

Please mark the box with the most appropriate response:

- ☐ I **have not** reviewed the Title Report and **do not know** if it provides environmental cleanup liens or AULs information.
- ■ I **have** reviewed the Title Report, and **No, it does not provide** environmental cleanup liens or AULs information..
- ☐ I **have** reviewed the Title Report, and **Yes, it does provide** environmental cleanup liens or AULs information. Explain:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

4. **Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?**

Please mark the box with the most appropriate response:

- [■] **No,** I **do not** have any specialized knowledge and/or experience related to the property or nearby properties.
- [ ] Yes, I **do** have specialized knowledge and/or experience related to the property or nearby properties. Explain:

5. **As the user of this ESA, based on your knowledge and experience related to the property, are you aware of any information pertaining to a reduction in value for the subject property relative to any known environmental issues?**

Please mark the box with the most appropriate response:

- [■] **No,** I **do not** have any information about a reduction in property value relative to environmental issues.
- [ ] **Yes**, I **do** have information about a reduction in property value relative to environmental issues. Explain:

6. **Does the purchase price being paid for this property reasonably reflect the fair market value of the property?**

Please mark the box with the most appropriate response:

- [■] **Yes**, I **do** believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Skip to question #7.
- [ ] **No**, I **do not** believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Proceed to question #6a.

   a. **If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? (40 CFR 312.29)**

   Please mark the box with the most appropriate response

   - [ ] **No**, I **have not** considered the idea that known or believed contamination at the site has caused the lower purchase price.
   - [ ] **Yes**, I **have** considered the idea that known or believed contamination at the site has caused the lower purchase price. Explain:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

7. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

Please mark the box with the most appropriate response:

a. Do you know the past uses of the property?

- ☐ I **do not** know.
- ■ I **do** know. Explain:

Farming crops

b. Do you know of specific chemicals are present or once were present at the property?

- ☐ I **do not** know.
- ■ I **do** know. Explain:

Legally permissible pesticides and herbicides

c. Do you know of any spills or other chemical releases that have taken place at the property?

- ■ I **do not** know.
- ☐ I **do** know. Explain:

d. Do you know of any environmental cleanups have taken place at the property?

- ■ I **do not** know.
- ☐ I **do** know. Explain:

8. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?

Please mark the box with the most appropriate response:

- ■ **No**, I do not know and/or do not have any experience with any obvious indicators that point to the presence or likely presence of contamination at the property.
- ☐ **Yes**, I do know of and/or do have experience with obvious indicators that point to the presence or likely presence of contamination at the property. Explain:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

9. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site.
- [ ] **Yes**, I am aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site. Explain:

10. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site.
- [ ] **Yes**, I am aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site. Explain:

11. Are you aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products..
- [ ] **Yes**, I am aware of a notice, or notices, from a government entity (or multiple government entities) regarding a possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Explain:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

This questionnaire was completed by (please print)

Name	Diego Osnaya
Title	Project Development Manager
Firm	Idemitsu Renewables/SF Jasmine, LLC
Street Address	50 California Street Suite 820
City, State, Zip Code	San Francisco, CA 94111
Phone Number	628-213-5528
Fax Number	

What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, consultant, etc.)? Tenant

Copies of the completed questionnaire should be faxed, emailed (preferably) or mailed to:

Rincon Consultants, Inc.
Attention: Environmental Site Assessment Division
2215 Faraday Avenue, Suite A
Carlsbad, CA 92008
Fax: (760) 918-9444
Email: LRoenicke@rinconconsultants.com

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.

Signature Diego Osnaya Date 12/10/2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Property Owner Interview Questionnaire

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

This questionnaire should be completed by the current property owner or a designated representative of the current property owner. We respectfully request that you fill out and return this form via fax at (760) 918-9444 or email to us at LRoenicke@rinconconsultants.com within one week from the date of this transmittal.

---

1. Was the subject property or any adjoining property ever used as:

- ☐ an airport
- ☐ a fire training area
- ☐ a gasoline or other fueling station
- ☐ a motor vehicle repair facility
- ☐ a commercial printing facility
- ☐ a dry cleaners
- ☐ a photo developing laboratory
- ☐ a metal plating facility
- ■ a farm
- ☐ a Department of Defense facility or training area
- ☐ a junkyard or landfill
- ☐ a waste treatment, storage, disposal, processing or recycling facility
- ☐ a machine shop
- ☐ a manufacturing facility
- ☐ an oil production facility (including oil wells)
- ☐ any other industrial use

Please check all that apply above and describe:

Farm, row crops, & application of legally permissible chemicals

2. Please describe the current land uses of the subject property and those surrounding your property. Please indicate all businesses/companies located on property.

2a. Current Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	farm, row crops; or fallowed land

2b. Current Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
■ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ■ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	public road, then row crops, permanent crops, office space, cooler facility, asparagus packing shed

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

2c. Current Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	farm, row crops

2d. Current Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	farm, row crops, permanent crops

2e. Current Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	public road, then row crops, permanent crops

3. Please describe the previous land uses of your property and those surrounding your property. Include property ownership and dates of operation if known.

3a. Previous Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	farm, row crops; or fallowed land

3b. Previous Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☒ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☒ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	public road, then row crops, permanent crops, office space, cooler facility, asparagus packing shed

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

3c. Previous Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	farm, row crops

3d. Previous Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	farm, row crops, permanent crops

3e. Previous Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	public road, then row crops, permanent crops

4. Who is the current owner of the property?

5. When did current ownership begin?

6. What is the age of the on-site facility?

N/A

7. Who is the previous owner of the property?

Andrews Ag

8. Please indicate the property's current:

Electrical service provider

Natural Gas service provider

Water service provider Wheeler Ridge Maricopa WSD

Sewer service provider

Solid waste hauler

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

9. **To the best of your knowledge, has your facility previously or does your facility currently store or use any of the following in individual containers larger than 5 gallons in volume or 50 gallons in the aggregate? (if Yes or Unknown, include how many, type, and size)**

☐ Damaged or discarded automotive or industrial batteries	
☐ Paints	
☐ Oils or solvents	
☐ Motor vehicle fleet	
■ Pesticides or herbicides	legally permissible pesticides and herbicides
☐ Other chemicals or hazardous substances	

10. **Please indicate any wastes generated at the facility:**

Hazardous Waste	Quantity	Disposal Method
Agricultural water discharge		

11. **Are there currently or to the best of your knowledge have there been previously, any industrial drums (typically 55 gallon) or sacks of chemicals located on the property or at the facility?**

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

12. **Are there currently or to the best of your knowledge have there been previously, any evidence of fill dirt having been brought onto the property that originated from a contaminated site or that is of an unknown origin?**

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

13. Are there currently or to the best of your knowledge have there been previously, any pits, ponds or lagoons located on the property in connection with waste treatment or waste disposal?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

14. Are there currently or to the best of your knowledge have there been previously, any sumps, clarifiers, or solvent degreasers on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

15. Are there currently or to the best of your knowledge have there been previously, any stained soil on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

16. Are there currently or to the best of your knowledge have there been previously, any storage tanks (above or below ground) located on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

17. Are there currently or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways (etc.) indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

18. If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government agency?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

19. Are there currently or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water, or are emitting foul odors?

☐ Yes ☐ No ☒ Unknown	If Yes or Unknown, please describe:

20. To the best of your knowledge has your facility previously or does your facility currently, discharge wastewater on or adjacent to the property other than storm water into a sanitary sewer system?

☐ Yes ☐ No ☒ Unknown	If Yes or Unknown, please describe:

21. Have any of the following ever been dumped above grade, buried and/or burned on the property? (please check all that apply and describe if possible)

☐ Hazardous substances	
☐ Petroleum products	
☐ Unidentified waste materials	
☐ Tires	
☐ Automotive or industrial batteries	
☐ Other waste materials (please describe)	

22. Are there currently or to the best of your knowledge have there been previously, a transformer, capacitor or any hydraulic equipment on the property?

☐ Yes ☐ No ☒ Unknown	If Yes or Unknown, please describe: PG&E Substation near eastern edge of the property

23. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of PCBs?

☐ Yes ☐ No ☒ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

24. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of pesticides or herbicides?

■ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe: farming activitiy

25. Do you have any knowledge of environmental liens that may have been recorded against the property or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

26. Do you have any knowledge of activity and use limitations (AULs) such as engineering controls, deed restrictions, land use restrictions, or institutional controls that may have been recorded against the property?

☐ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe:

27. Have you been informed of the past or current existence of hazardous substances, petroleum products, or environmental violations with respect to the property or any facility located on the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

28. Do you have any knowledge of any environmental site assessments of the property or facility?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

29. Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release of any hazardous substances or petroleum products involving the property by any owner or occupant of the property?

☐ Yes ☐ No ■ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 20-09824

Site Name and Full Address: Jasmine Solar Project, Bakersfield, Kern County, California

30. Are there any site-specific geotechnical or geologic reports available for the subject property?

☐ Yes ☐ No ☒ Unknown	If Yes or Unknown, please describe:

31. Is there a Title Report available for the subject property?

☒ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe:

This questionnaire was completed by (please print)

Name: Jon Reiter

Title:

Firm: Maricopa Orchards

Street Address:

City, State, Zip Code:

Phone Number:

Fax Number:

What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, consultant, etc.)? Agent

Copies of the completed questionnaire should be faxed, emailed (preferably) or mailed to:

Rincon Consultants, Inc.
Attention: Environmental Site Assessment Division
2215 Faraday Avenue, Suite A
Carlsbad, CA 92008
Fax: (760) 918-9444
Email: LRoenicke@rinconconsultants.com

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.

Signature _____ Date _____

Appendix B

Regulatory Records Search

Jasmine Solar Project
Jasmine Solar Project
Bakersfield, CA 93311

Inquiry Number: 06246888.2r
October 29, 2020

The EDR Radius Map™ Report with GeoCheck®

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

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	9
Orphan Summary	58
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-8
Physical Setting Source Map Findings	A-9
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

JASMINE SOLAR PROJECT
BAKERSFIELD, CA 93311

COORDINATES

Latitude (North):	35.0985690 - 35° 5' 54.84''
Longitude (West):	119.1170360 - 119° 7' 1.32''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	307029.4
UTM Y (Meters):	3885826.8
Elevation:	370 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5639469 COAL OIL CANYON, CA
Version Date:	2012
Northeast Map:	5639068 CONNER, CA
Version Date:	2012
Southwest Map:	5639471 CONNER SW, CA
Version Date:	2012
Northwest Map:	5639501 MILLUX, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140617, 20140618
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
JASMINE SOLAR PROJECT
BAKERSFIELD, CA 93311

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	BORDEAUX 1 31	UNINCORPORATED	NPDES	Higher	1356, 0.257, SSW
A2	BORDEAUX 1-31	ON NORTH SIDE OF COP	CERS	Higher	1526, 0.289, SSW
B3	SOUTH VALLEY GINS IN	14011 COPUS RD	FINDS	Higher	1557, 0.295, South
B4	SOUTH VALLEY GINS IN	14011 COPUS RD	CUPA Listings	Higher	1557, 0.295, South
5	GEOKINETICS	14046 COPUS RD	HWTS	Higher	2267, 0.429, SE
C6	SOUTH VALLEY GINS IN	27300 OLD RIVER ROAD	CERS	Higher	2413, 0.457, ESE
C7	SOUTH VALLEY GINS IN	27300 OLD RIVER RD	HWTS	Higher	2413, 0.457, ESE
C8	TEN STAR FARMING	27300 OLD RIVER RD	CUPA Listings, HWTS	Higher	2413, 0.457, ESE
C9	SOUTH VALLEY GINS IN	27300 OLD RIVER ROAD	FINDS	Higher	2413, 0.457, ESE
10	EVAPORATION BASIN	COPUS & OLD RIVER RO	WMUDS/SWAT	Higher	2773, 0.525, SE
D11	JAKOV P DULCICH & SO	14720 COPUS RD	HWTS	Higher	3287, 0.623, WSW
D12	JD&K FARM	14720 COPUS RD	HAZNET, HWTS	Higher	3287, 0.623, WSW
E13	ANDREW AGG INC	13533 COPUS RD	HAZNET, HWTS	Higher	3308, 0.627, ESE
E14	LAKEVIEW BAPTIST CHU	13533 COPUS RD	HWTS	Higher	3308, 0.627, ESE
F15	RAINBOW RANCH EVAP B	13650 COPUS	FINDS	Higher	4387, 0.831, ESE
F16	ANDREWSAG INC	13650 COPUS RD	CERS TANKS, CUPA Listings, CERS, HWTS	Higher	4387, 0.831, ESE
F17	ANDREWSAG INC	13650 COPUS RD	FINDS, ECHO	Higher	4387, 0.831, ESE
F18	ANDREWSAG INC	13650 COPUS RD	AST	Higher	4387, 0.831, ESE
F19	ANDREWSAG INC	13650 COPUS RD	RCRA NonGen / NLR	Higher	4387, 0.831, ESE
F20	RAINBOW RANCH EVAP B	13650 COPUS RD	ENF, WDS, CIWQS, CERS	Higher	4387, 0.831, ESE
F21	RAINBOW RANCHER INC	13650 COPUS RD	HWTS	Higher	4387, 0.831, ESE
F22	ANDREWSAG INC	13650 COPUS	AST	Higher	4387, 0.831, ESE
G23	JAKOV DULCICH & SONS	14900 COPUS RD	RCRA NonGen / NLR	Higher	4521, 0.856, WSW
G24	JAKOV P. DULCICH AND	14900 COPUS RD	CERS HAZ WASTE, CERS TANKS, CUPA Listings, CERS	Higher	4521, 0.856, WSW
G25	JAKOV P. DULCICH AND	14900 COPUS RD	AST	Higher	4521, 0.856, WSW
G26	JAKOV P DULCICH & SO	14900 COPUS RD	HWTS	Higher	4521, 0.856, WSW
G27	JAKOV P. DULCICH AND	14900 COPUS RD	FINDS, ECHO	Higher	4521, 0.856, WSW
28	WESTSIDE PARKWAY PHA	MOHAWK ST TRUXTUN AV	CIWQS	Lower	4898, 0.928, NNE
H29	PG&E: LAKEVIEW SUBST	COPUS ROAD & SCHALLO	CUPA Listings	Lower	5108, 0.967, ESE
H30	PG&E LAKEVIEW SUBSTA	COPUS ROAD & SCHALLO	HAZNET, HWTS	Lower	5108, 0.967, ESE
H31	PG&E: LAKEVIEW SUBST	COPUS ROAD & SCHALLO	FINDS	Lower	5108, 0.967, ESE
I32	CONOCO INC., RIO VIE	OLD RIVER RD (S OF C	FINDS	Higher	5205, 0.986, SSE
I33	ARCO OIL AND GAS CO.		FINDS	Higher	5205, 0.986, SSE
34	CALIFORNIA RESOURCES	28 OF T12N R21W	CUPA Listings, CERS	Higher	5915, 1.120, WSW
35	WATTS FARMING COMPAN	641 SCHALLOCK RD	RCRA NonGen / NLR	Higher	6271, 1.188, 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 CERCLIS NFRAP site list

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

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

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

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ..... EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST ..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

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

State and tribal Brownfields sites

BROWNFIELDS ..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

EXECUTIVE SUMMARY

Local Lists of Hazardous waste / Contaminated Sites

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

Local Lists of Registered Storage Tanks

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

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database

HIST FTTS - FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS - Incident and Accident Data
CONSENT - Superfund (CERCLA) Consent Decrees
INDIAN RESERV - Indian Reservations
FUSRAP - Formerly Utilized Sites Remedial Action Program
UMTRA - Uranium Mill Tailings Sites
LEAD SMELTERS - Lead Smelter Sites
US AIRS - Aerometric Information Retrieval System Facility Subsystem
US MINES - Mines Master Index File
ABANDONED MINES - Abandoned Mines
UXO - Unexploded Ordnance Sites
DOCKET HWC - Hazardous Waste Compliance Docket Listing
FUELS PROGRAM - EPA Fuels Program Registered Listing
CA BOND EXP. PLAN - Bond Expenditure Plan
Cortese - "Cortese" Hazardous Waste & Substances Sites List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
Financial Assurance - Financial Assurance Information Listing
ICE - ICE
HIST CORTESE - Hazardous Waste & Substance Site List
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MINES - Mines Site Location Listing
MWMP - Medical Waste Management Program Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
UIC GEO - UIC GEO (GEOTRACKER)
WASTEWATER PITS - Oil Wastewater Pits Listing
WIP - Well Investigation Program Case List
MILITARY PRIV SITES - MILITARY PRIV SITES (GEOTRACKER)
PROJECT - PROJECT (GEOTRACKER)
WDR - Waste Discharge Requirements Listing
NON-CASE INFO - NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS - OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS - PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT - SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ - Well Stimulation Project (GEOTRACKER)
MINES MRDS - Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

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

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF - Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

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

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

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

STANDARD ENVIRONMENTAL RECORDS

State and tribal registered storage tank lists

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 3 AST sites within approximately 1.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ANDREWSAG INC	13650 COPUS RD	ESE 1/2 - 1 (0.831 mi.)	F18	29
Database: AST, Date of Government Version: 07/06/2016				
ANDREWSAG INC	13650 COPUS	ESE 1/2 - 1 (0.831 mi.)	F22	36
Database: AST, Date of Government Version: 07/06/2016				
JAKOV P. DULCICH AND	14900 COPUS RD	WSW 1/2 - 1 (0.856 mi.)	G25	46
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EVAPORATION BASIN	COPUS & OLD RIVER RO	SE 1/2 - 1 (0.525 mi.)	10	16

EXECUTIVE SUMMARY

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 07/20/2020 has revealed that there is 1 CERS HAZ WASTE site within approximately 1.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JAKOV P. DULCICH AND	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G24***	***40***

Local Lists of Registered Storage Tanks

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 07/20/2020 has revealed that there are 2 CERS TANKS sites within approximately 1.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ANDREWSAG INC	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F16***	***22***
JAKOV P. DULCICH AND	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G24***	***40***

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 06/15/2020 has revealed that there are 3 RCRA NonGen / NLR sites within approximately 1.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ANDREWSAG INC EPA ID:: CAL000337712	13650 COPUS RD	ESE 1/2 - 1 (0.831 mi.)	F19	29
JAKOV DULCICH & SONS EPA ID:: CAL000413948	14900 COPUS RD	WSW 1/2 - 1 (0.856 mi.)	G23	37
WATTS FARMING COMPAN EPA ID:: CAL000412690	641 SCHALLOCK RD	SE 1 - 2 (1.188 mi.)	35	55

EXECUTIVE SUMMARY

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 02/03/2020 has revealed that there are 8 FINDS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SOUTH VALLEY GINS IN Registry ID:: 110065694760	14011 COPUS RD	S 1/4 - 1/2 (0.295 mi.)	B3	12
SOUTH VALLEY GINS IN Registry ID:: 110001197017	27300 OLD RIVER ROAD	ESE 1/4 - 1/2 (0.457 mi.)	C9	16
RAINBOW RANCH EVAP B Registry ID:: 110066621560	13650 COPUS	ESE 1/2 - 1 (0.831 mi.)	F15	21
ANDREWSAG INC Registry ID:: 110066747514	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F17***	***28***
JAKOV P. DULCICH AND Registry ID:: 110059756946	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G27***	***48***
CONOCO INC., RIO VIE Registry ID:: 110013947104	OLD RIVER RD (S OF C	SSE 1/2 - 1 (0.986 mi.)	I32	52
ARCO OIL AND GAS CO. Registry ID:: 110017433785		SSE 1/2 - 1 (0.986 mi.)	I33	52

Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E: LAKEVIEW SUBST Registry ID:: 110057103744	COPUS ROAD & SCHALLO	ESE 1/2 - 1 (0.967 mi.)	H31	51

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 06/27/2020 has revealed that there are 2 ECHO sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ANDREWSAG INC Registry ID: 110066747514	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F17***	***28***
JAKOV P. DULCICH AND Registry ID: 110059756946	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G27***	***48***

EXECUTIVE SUMMARY

CUPA Listings: 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.

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 6 CUPA Listings sites within approximately 1.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SOUTH VALLEY GINS IN	14011 COPUS RD	S 1/4 - 1/2 (0.295 mi.)	B4	13
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				
TEN STAR FARMING	***27300 OLD RIVER RD***	***ESE 1/4 - 1/2 (0.457 mi.)***	***C8***	***15***
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				
ANDREWSAG INC	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F16***	***22***
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				
JAKOV P. DULCICH AND	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G24***	***40***
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				
CALIFORNIA RESOURCES	***28 OF T12N R21W***	***WSW 1 - 2 (1.120 mi.)***	***34***	***52***
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				

Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E: LAKEVIEW SUBST	COPUS ROAD & SCHALLO	ESE 1/2 - 1 (0.967 mi.)	H29	49
Database: KERN CO CUPA, Date of Government Version: 07/28/2020				

ENF: A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

A review of the ENF list, as provided by EDR, and dated 07/20/2020 has revealed that there is 1 ENF site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RAINBOW RANCH EVAP B	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F20***	***32***
Status: Historical				
Status: Historical				
Facility Id: 251503				

HAZNET: 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 from non-California manifests & continuation sheets are not included at the present time. 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, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2019 has revealed that there are 3 HAZNET sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JD&K FARM	***14720 COPUS RD***	***WSW 1/2 - 1 (0.623 mi.)***	***D12***	***18***

GEPAID: CAL000352083

ANDREW AGG INC	***13533 COPUS RD***	***ESE 1/2 - 1 (0.627 mi.)***	***E13***	***20***
GEPAID: CAC002601345				

Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E LAKEVIEW SUBSTA	***COPUS ROAD & SCHALLO***	***ESE 1/2 - 1 (0.967 mi.)***	***H30***	***49***
GEPAID: CAC002841028				

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 05/12/2020 has revealed that there is 1 NPDES site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BORDEAUX 1 31	UNINCORPORATED	SSW 1/4 - 1/2 (0.257 mi.)	A1	9

WDS: California Water Resources Control Board - Waste Discharge System.

A review of the WDS list, as provided by EDR, and dated 06/19/2007 has revealed that there is 1 WDS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RAINBOW RANCH EVAP B	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F20***	***32***
Facility Status: A				
Facility Id: 5D155003001				

CIWQS: 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.

A review of the CIWQS list, as provided by EDR, and dated 06/01/2020 has revealed that there are 2 CIWQS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RAINBOW RANCH EVAP B	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F20***	***32***

Lower Elevation	Address	Direction / Distance	Map ID	Page
WESTSIDE PARKWAY PHA	MOHAWK ST TRUXTUN AV	NNE 1/2 - 1 (0.928 mi.)	28	48

CERS: 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

A review of the CERS list, as provided by EDR, and dated 07/20/2020 has revealed that there are 5

EXECUTIVE SUMMARY

CERS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BORDEAUX 1-31	ON NORTH SIDE OF COP	SSW 1/4 - 1/2 (0.289 mi.)	A2	11
SOUTH VALLEY GINS IN	27300 OLD RIVER ROAD	ESE 1/4 - 1/2 (0.457 mi.)	C6	14
ANDREWSAG INC	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F16***	***22***
RAINBOW RANCH EVAP B	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F20***	***32***
JAKOV P. DULCICH AND	***14900 COPUS RD***	***WSW 1/2 - 1 (0.856 mi.)***	***G24***	***40***

HWTS: DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

A review of the HWTS list, as provided by EDR, and dated 04/08/2020 has revealed that there are 11 HWTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GEOKINETICS	14046 COPUS RD	SE 1/4 - 1/2 (0.429 mi.)	5	13
SOUTH VALLEY GINS IN	27300 OLD RIVER RD	ESE 1/4 - 1/2 (0.457 mi.)	C7	14
TEN STAR FARMING	***27300 OLD RIVER RD***	***ESE 1/4 - 1/2 (0.457 mi.)***	***C8***	***15***
JAKOV P DULCICH & SO	14720 COPUS RD	WSW 1/2 - 1 (0.623 mi.)	D11	17
JD&K FARM	***14720 COPUS RD***	***WSW 1/2 - 1 (0.623 mi.)***	***D12***	***18***
ANDREW AGG INC	***13533 COPUS RD***	***ESE 1/2 - 1 (0.627 mi.)***	***E13***	***20***
LAKEVIEW BAPTIST CHU	13533 COPUS RD	ESE 1/2 - 1 (0.627 mi.)	E14	21
ANDREWSAG INC	***13650 COPUS RD***	***ESE 1/2 - 1 (0.831 mi.)***	***F16***	***22***
RAINBOW RANCHER INC	13650 COPUS RD	ESE 1/2 - 1 (0.831 mi.)	F21	36
JAKOV P DULCICH & SO	14900 COPUS RD	WSW 1/2 - 1 (0.856 mi.)	G26	47

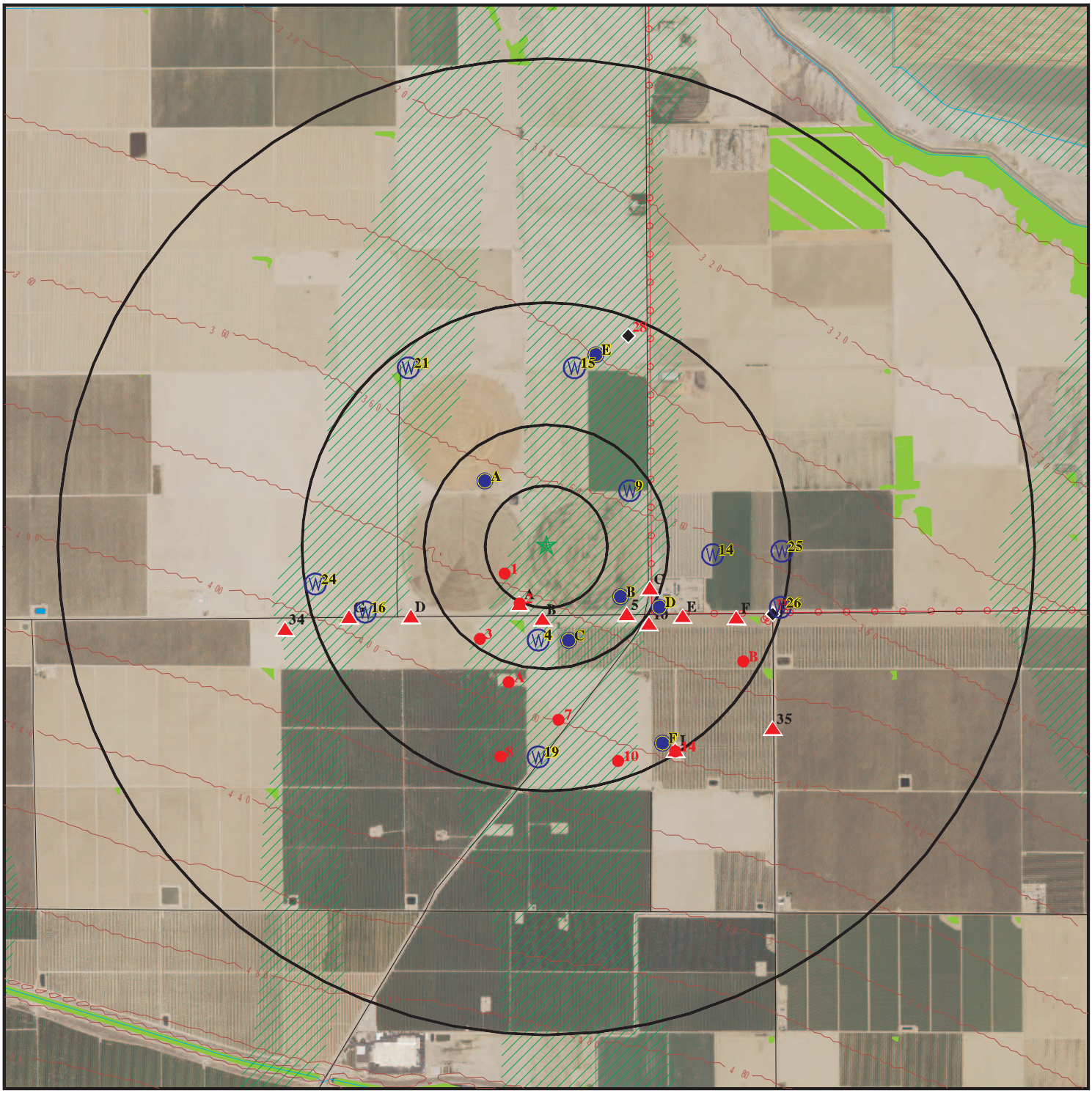
Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E LAKEVIEW SUBSTA	***COPUS ROAD & SCHALLO***	***ESE 1/2 - 1 (0.967 mi.)***	***H30***	***49***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
	CDL

OVERVIEW MAP - 06246888.2R



- 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 1/2 1 2 Miles

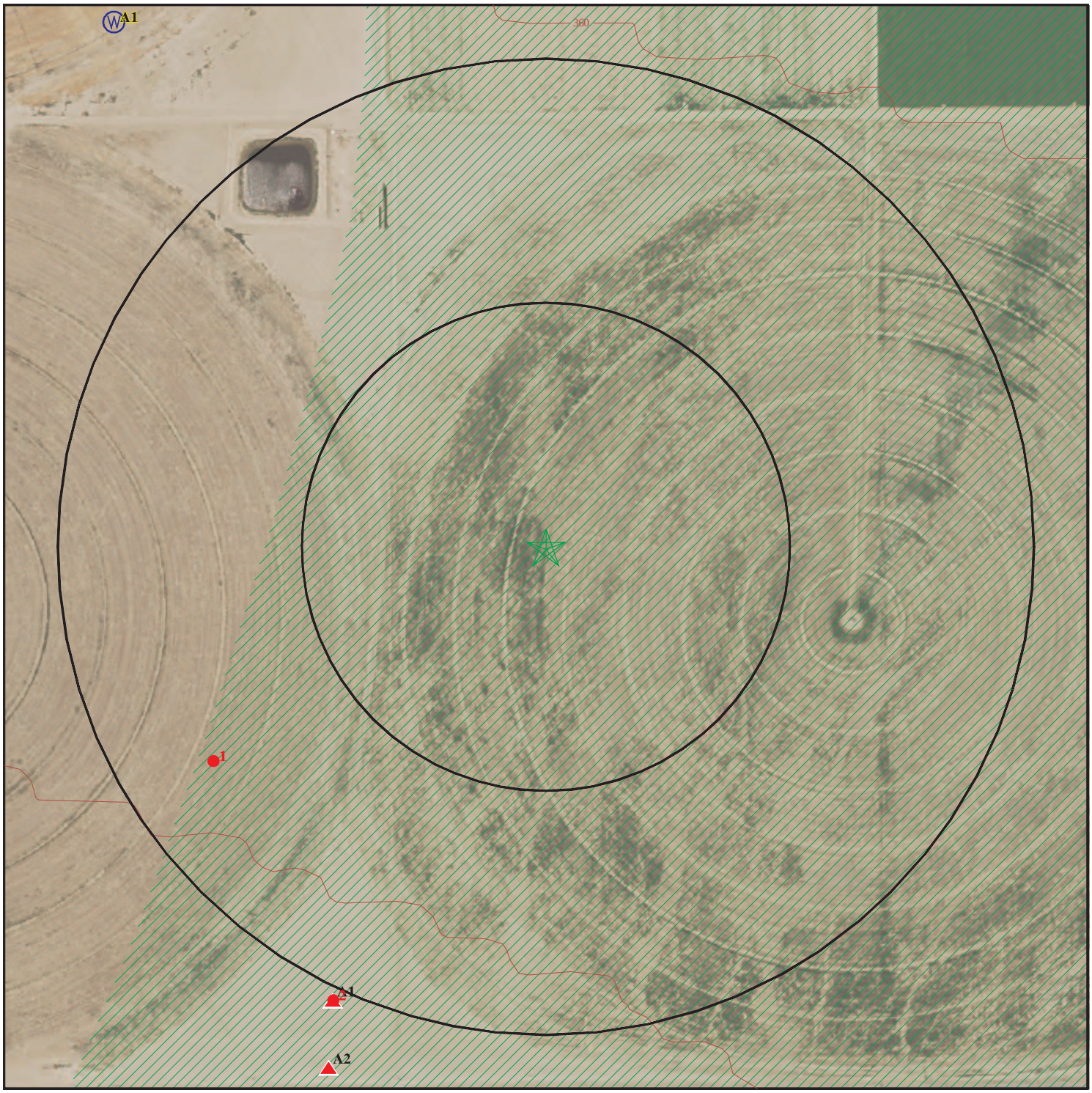
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

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: Jasmine Solar Project	CLIENT: Rincon
ADDRESS: Jasmine Solar Project Bakersfield CA 93311	CONTACT: Lauren Roenicke
LAT/LONG: 35.098569 / 119.117036	INQUIRY #: 06246888.2r DATE: October 29, 2020 3:33 pm

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DETAIL MAP - 06246888.2R



- 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

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- 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:	Jasmine Solar Project	CLIENT:	Rincon
ADDRESS:	Jasmine Solar Project Bakersfield CA 93311	CONTACT:	Lauren Roenicke
		INQUIRY #:	06246888.2r
LAT/LONG:	35.098569 / 119.117036	DATE:	October 29, 2020 3:34 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	2.000		0	0	0	0	0	0
Proposed NPL	2.000		0	0	0	0	0	0
NPL LIENS	2.000		0	0	0	0	0	0
Federal Delisted NPL site list								
Delisted NPL	2.000		0	0	0	0	0	0
Federal CERCLIS list								
FEDERAL FACILITY	1.500		0	0	0	0	0	0
SEMS	1.500		0	0	0	0	0	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	1.500		0	0	0	0	0	0
Federal RCRA CORRACTS facilities list								
CORRACTS	2.000		0	0	0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	1.500		0	0	0	0	0	0
Federal RCRA generators list								
RCRA-LQG	1.250		0	0	0	0	0	0
RCRA-SQG	1.250		0	0	0	0	0	0
RCRA-VSQG	1.250		0	0	0	0	0	0
Federal institutional controls / engineering controls registries								
LUCIS	1.500		0	0	0	0	0	0
US ENG CONTROLS	1.500		0	0	0	0	0	0
US INST CONTROLS	1.500		0	0	0	0	0	0
Federal ERNS list								
ERNS	1.000		0	0	0	0	NR	0
State- and tribal - equivalent NPL								
RESPONSE	2.000		0	0	0	0	0	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	2.000		0	0	0	0	0	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	1.500		0	0	0	0	0	0
State and tribal leaking storage tank lists								
LUST	1.500		0	0	0	0	0	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	1.500		0	0	0	0	0	0
CPS-SLIC	1.500		0	0	0	0	0	0
State and tribal registered storage tank lists								
FEMA UST	1.250		0	0	0	0	0	0
UST	1.250		0	0	0	0	0	0
AST	1.250		0	0	0	3	0	3
INDIAN UST	1.250		0	0	0	0	0	0
State and tribal voluntary cleanup sites								
INDIAN VCP	1.500		0	0	0	0	0	0
VCP	1.500		0	0	0	0	0	0
State and tribal Brownfields sites								
BROWNFIELDS	1.500		0	0	0	0	0	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	1.500		0	0	0	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	1.500		0	0	0	1	0	1
SWRCY	1.500		0	0	0	0	0	0
HAULERS	1.000		0	0	0	0	NR	0
INDIAN ODI	1.500		0	0	0	0	0	0
DEBRIS REGION 9	1.500		0	0	0	0	0	0
ODI	1.500		0	0	0	0	0	0
IHS OPEN DUMPS	1.500		0	0	0	0	0	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	1.000		0	0	0	0	NR	0
HIST Cal-Sites	2.000		0	0	0	0	0	0
SCH	1.250		0	0	0	0	0	0
CDL	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	1.250		0	0	0	1	0	1
Toxic Pits	2.000		0	0	0	0	0	0
US CDL	1.000		0	0	0	0	NR	0
PFAS	1.500		0	0	0	0	0	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	1.250		0	0	0	0	0	0
HIST UST	1.250		0	0	0	0	0	0
CERS TANKS	1.250		0	0	0	2	0	2
CA FID UST	1.250		0	0	0	0	0	0
Local Land Records								
LIENS	1.000		0	0	0	0	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	1.000		0	0	0	0	NR	0
DEED	1.500		0	0	0	0	0	0
Records of Emergency Release Reports								
HMIRS	1.000		0	0	0	0	NR	0
CHMIRS	1.000		0	0	0	0	NR	0
LDS	1.000		0	0	0	0	NR	0
MCS	1.000		0	0	0	0	NR	0
SPILLS 90	1.000		0	0	0	0	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	1.250		0	0	0	2	1	3
FUDS	2.000		0	0	0	0	0	0
DOD	2.000		0	0	0	0	0	0
SCRD DRYCLEANERS	1.500		0	0	0	0	0	0
US FIN ASSUR	1.000		0	0	0	0	NR	0
EPA WATCH LIST	1.000		0	0	0	0	NR	0
2020 COR ACTION	1.250		0	0	0	0	0	0
TSCA	1.000		0	0	0	0	NR	0
TRIS	1.000		0	0	0	0	NR	0
SSTS	1.000		0	0	0	0	NR	0
ROD	2.000		0	0	0	0	0	0
RMP	1.000		0	0	0	0	NR	0
RAATS	1.000		0	0	0	0	NR	0
PRP	1.000		0	0	0	0	NR	0
PADS	1.000		0	0	0	0	NR	0
ICIS	1.000		0	0	0	0	NR	0
FTTS	1.000		0	0	0	0	NR	0
MLTS	1.000		0	0	0	0	NR	0
COAL ASH DOE	1.000		0	0	0	0	NR	0
COAL ASH EPA	1.500		0	0	0	0	0	0
PCB TRANSFORMER	1.000		0	0	0	0	NR	0
RADINFO	1.000		0	0	0	0	NR	0
HIST FTTS	1.000		0	0	0	0	NR	0
DOT OPS	1.000		0	0	0	0	NR	0
CONSENT	2.000		0	0	0	0	0	0
INDIAN RESERV	2.000		0	0	0	0	0	0
FUSRAP	2.000		0	0	0	0	0	0
UMTRA	1.500		0	0	0	0	0	0
LEAD SMELTERS	1.000		0	0	0	0	NR	0
US AIRS	1.000		0	0	0	0	NR	0
US MINES	1.250		0	0	0	0	0	0
ABANDONED MINES	1.250		0	0	0	0	0	0
FINDS	1.000		0	0	2	6	NR	8
ECHO	1.000		0	0	0	2	NR	2
UXO	2.000		0	0	0	0	0	0
DOCKET HWC	1.000		0	0	0	0	NR	0
FUELS PROGRAM	1.250		0	0	0	0	0	0
CA BOND EXP. PLAN	2.000		0	0	0	0	0	0
Cortese	1.500		0	0	0	0	0	0
CUPA Listings	1.250		0	0	2	3	1	6

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	1.250		0	0	0	0	0	0
EMI	1.000		0	0	0	0	NR	0
ENF	1.000		0	0	0	1	NR	1
Financial Assurance	1.000		0	0	0	0	NR	0
HAZNET	1.000		0	0	0	3	NR	3
ICE	1.000		0	0	0	0	NR	0
HIST CORTESE	1.500		0	0	0	0	0	0
HWP	2.000		0	0	0	0	0	0
HWT	1.250		0	0	0	0	0	0
MINES	1.250		0	0	0	0	0	0
MWMP	1.250		0	0	0	0	0	0
NPDES	1.000		0	0	1	0	NR	1
PEST LIC	1.000		0	0	0	0	NR	0
PROC	1.500		0	0	0	0	0	0
Notify 65	2.000		0	0	0	0	0	0
UIC	1.000		0	0	0	0	NR	0
UIC GEO	1.000		0	0	0	0	NR	0
WASTEWATER PITS	1.500		0	0	0	0	0	0
WDS	1.000		0	0	0	1	NR	1
WIP	1.250		0	0	0	0	0	0
MILITARY PRIV SITES	1.000		0	0	0	0	NR	0
PROJECT	1.000		0	0	0	0	NR	0
WDR	1.000		0	0	0	0	NR	0
CIWQS	1.000		0	0	0	2	NR	2
CERS	1.000		0	0	2	3	NR	5
NON-CASE INFO	1.000		0	0	0	0	NR	0
OTHER OIL GAS	1.000		0	0	0	0	NR	0
PROD WATER PONDS	1.000		0	0	0	0	NR	0
SAMPLING POINT	1.000		0	0	0	0	NR	0
WELL STIM PROJ	1.000		0	0	0	0	NR	0
HWTS	1.000		0	0	3	8	NR	11
MINES MRDS	1.000		0	0	0	0	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	2.000		0	0	0	0	0	0
EDR Hist Auto	1.125		0	0	0	0	0	0
EDR Hist Cleaner	1.125		0	0	0	0	0	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	1.000		0	0	0	0	NR	0
RGA LUST	1.000		0	0	0	0	NR	0
- Totals --		0	0	0	10	38	2	50

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SSW
1/4-1/2
0.257 mi.
1356 ft.

BORDEAUX 1 31
UNINCORPORATED
MARICOPA, CA 93252

Site 1 of 2 in cluster A

NPDES **S121451377**
N/A

Relative:
Higher

Actual:
383 ft.

NPDES:

Name:	BORDEAUX 1 31
Address:	UNINCORPORATED
City,State,Zip:	MARICOPA, CA 93252
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	5F15W003499
Regulatory Measure Type:	Construction
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Expired
Status Date:	09/01/2018
Operator Name:	Grapevine Energy LLC
Operator Address:	5300 Office Center Court
Operator City:	Bakersfield
Operator State:	California
Operator Zip:	93309

NPDES as of 03/2018:

NPDES Number:	CAS000002
Status:	Active
Agency Number:	0
Region:	5F
Regulatory Measure ID:	494752
Order Number:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	5F15W003499
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	02/01/2018
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Grapevine Energy LLC
Discharge Address:	5300 Office Center Court
Discharge City:	Bakersfield
Discharge State:	California
Discharge Zip:	93309
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported

BORDEAUX 1 31 (Continued) **S121451377**

Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

A2
SSW
1/4-1/2
0.289 mi.
1526 ft.

BORDEAUX 1-31 — **CERS** — **S123102265**
ON NORTH SIDE OF COPUS RD, 1/2 MI WEST OF CORNER OF COPUS/OL — **N/A**
BAKERSFIELD, CA 93311

Site 2 of 2 in cluster A

Relative:
Higher

Actual:
385 ft.

CERS:

Name:	BORDEAUX 1-31
Address:	ON NORTH SIDE OF COPUS RD, 1/2 MI WEST OF CORNER OF COPUS/OLD RIVER RD
City,State,Zip:	BAKERSFIELD, CA 93311
Site ID:	443211
CERS ID:	10772722
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	Grapevine Energy LLC
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:	Paul White
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	5350 Office Center Court, Ste 75
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93309
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Mike Unsel
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) 343-3340

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

BORDEAUX 1-31 (Continued) **S123102265**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740
Affiliation Type Desc:	Environmental Contact
Entity Name:	Paul White
Entity Title:	Not reported
Affiliation Address:	225 Union Blvd., Ate. 150
Affiliation City:	Lakewood
Affiliation State:	CO
Affiliation Country:	Not reported
Affiliation Zip:	80228
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Paul White
Entity Title:	Consultant
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Grapevine Energy LLC
Entity Title:	Not reported
Affiliation Address:	5330 Office Center Court, Ste. 75
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93309
Affiliation Phone:	(661) 427-4182

B3 **SOUTH VALLEY GINS INC -LAKEVIEW MODULE YARD** **FINDS** **1023278968**
South **14011 COPUS RD** **N/A**
1/4-1/2 **BAKERSFIELD, CA 93313**
0.295 mi.
1557 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
384 ft.

FINDS:
Registry ID: 110065694760

Click Here:

Environmental Interest/Information System:
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

B4
South
1/4-1/2
0.295 mi.
1557 ft.

SOUTH VALLEY GINS INC -LAKEVIEW MODULE YARD
14011 COPUS RD
BAKERSFIELD, CA

Site 2 of 2 in cluster B

CUPA Listings **S126202861**
N/A

Relative:
Higher

Actual:
384 ft.

KERN CO CUPA:

Facility ID:	FA0035029
CERS ID:	10237924
Name:	SOUTH VALLEY GINS INC -LAKEVIEW MODULE YARD
Address:	14011 COPUS RD
Address 2:	14011 COPUS RD
City,State,Zip:	BAKERSFIELD, CA
Billing Status:	Inactive, non-billable
Program Element:	BUS PLAN SMALL LOW RISK 1 UNIT
Program Element Code:	CB1T
HMIRRP Due Date:	6/30
Current Inspection Date:	08/01/2016
Employee:	Elfstrom
Mailing Address:	9759 VALPREDO RD
Mailing Address 2:	Not reported
Mailing City:	BAKERSFIELD
Mailing State:	CA
Mailing Zip:	93313-9660

5
SE
1/4-1/2
0.429 mi.
2267 ft.

GEOKINETICS
14046 COPUS RD
BAKERSFIELD, CA 93311

HWTS **S124912540**
N/A

Relative:
Higher

Actual:
377 ft.

HWTS:

Name:	GEOKINETICS
Address:	14046 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93311
EPA ID:	CAL000421621
Inactive Date:	06/30/2017
Create Date:	11/02/2016
Last Act Date:	11/02/2016
Mailing Name:	Not reported
Mailing Address:	13645 N PROMENDADE BLVD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	STAFFORD, TX 77477
Owner Name:	GEOKINETICS
Owner Address:	1500 CITY WEST BLVD STE 800
Owner Address 2:	Not reported
Owner City,State,Zip:	HOUSTON, TX 77042
Contact Name:	CESAR ADRIAN
Contact Address:	2400 CAMINO DEL RIO
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93308

NAICS:

EPA ID:	CAL000421621
Create Date:	2016-11-02 16:23:08
NAICS Code:	811111
NAICS Description:	General Automotive Repair
Issued EPA ID Date:	2016-11-02 16:23:08
Inactive Date:	2017-06-30 00:00:00

GEOKINETICS (Continued) **S124912540**

Facility Name:	GEOKINETICS
Facility Address:	14046 COPUS RD
Facility Address 2:	Not reported
Facility City:	BAKERSFIELD
Facility County:	15
Facility State:	CA
Facility Zip:	93311

C6 **SOUTH VALLEY GINS INC** **CERS** **S123529370**
ESE **27300 OLD RIVER ROAD** **N/A**
1/4-1/2 **BAKERSFIELD, CA 93311**
0.457 mi.
2413 ft. **Site 1 of 4 in cluster C**

Relative:
Higher

Actual:
370 ft.

CERS:

Name:	SOUTH VALLEY GINS INC
Address:	27300 OLD RIVER ROAD
City,State,Zip:	BAKERSFIELD, CA 93311
Site ID:	495272
CERS ID:	110001197017
CERS Description:	US EPA Air Emission Inventory System (EIS)

C7 **SOUTH VALLEY GINS INC** **HWTS** **S124873849**
ESE **27300 OLD RIVER RD** **N/A**
1/4-1/2 **BAKERSFIELD, CA 93313**
0.457 mi.
2413 ft. **Site 2 of 4 in cluster C**

Relative:
Higher

Actual:
370 ft.

HWTS:

Name:	SOUTH VALLEY GINS INC
Address:	27300 OLD RIVER RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313
EPA ID:	CAL000336957
Inactive Date:	06/30/2012
Create Date:	10/06/2008
Last Act Date:	02/06/2013
Mailing Name:	Not reported
Mailing Address:	9759 VALPREDO RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 933139660
Owner Name:	SOUTH VALLEY GINS INC
Owner Address:	9759 VALPREDO RD
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 933139660
Contact Name:	MIKE LEE
Contact Address:	14011 COPUS RD
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 933119406

NAICS:

EPA ID:	CAL000336957
Create Date:	2009-12-03 12:41:18
NAICS Code:	115111
NAICS Description:	Cotton Ginning
Issued EPA ID Date:	2008-10-06 11:02:11

SOUTH VALLEY GINS INC (Continued) **S124873849**

Inactive Date:	2012-06-30 00:00:00
Facility Name:	SOUTH VALLEY GINS INC
Facility Address:	27300 OLD RIVER RD
Facility Address 2:	Not reported
Facility City:	BAKERSFIELD
Facility County:	15
Facility State:	CA
Facility Zip:	93313

C8 **TEN STAR FARMING** **CUPA Listings** **S124610885**
ESE **27300 OLD RIVER RD** **HWTS** **N/A**
1/4-1/2 **BAKERSFIELD, CA 93313**
0.457 mi.
2413 ft. **Site 3 of 4 in cluster C**

Relative:
Higher

Actual:
370 ft.

KERN CO CUPA:

Facility ID:	FA0031735
CERS ID:	10662412
Name:	SOUTH VALLEY GRAIN
Address:	27300 OLD RIVER RD
Address 2:	27300 Old River Rd
City,State,Zip:	BAKERSFIELD, CA
Billing Status:	Inactive, non-billable
Program Element:	BUS PLAN SMALL LOW RISK 1 UNIT
Program Element Code:	CB1T
HMIRRP Due Date:	9/30
Current Inspection Date:	09/01/2016
Employee:	Elfstrom
Mailing Address:	27300 Old River Road
Mailing Address 2:	Not reported
Mailing City:	Bakersfield
Mailing State:	CA
Mailing Zip:	93311

HWTS:

Name:	TEN STAR FARMING
Address:	27300 OLD RIVER RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313
EPA ID:	CAC002682304
Inactive Date:	06/19/2012
Create Date:	12/21/2011
Last Act Date:	12/21/2011
Mailing Name:	Not reported
Mailing Address:	10457 VAN HORN RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 93313
Owner Name:	TEN STAR FARMING
Owner Address:	10457 VAN HORN RD
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 93313
Contact Name:	KEVIN GIOVONNI
Contact Address:	10457 VAN HORN RD
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313

C9
ESE
1/4-1/2
0.457 mi.
2413 ft.

SOUTH VALLEY GINS INC
27300 OLD RIVER ROAD
BAKERSFIELD, CA 93311

Site 4 of 4 in cluster C

FINDS **1004441880**
N/A

Relative:
Higher

Actual:
370 ft.

FINDS:
Registry ID: 110001197017

Click Here:

Environmental Interest/Information System:
AIR EMISSIONS CLASSIFICATION UNKNOWN
HAZARDOUS AIR POLLUTANT MAJOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

10
SE
1/2-1
0.525 mi.
2773 ft.

EVAPORATION BASIN
COPUS & OLD RIVER ROAD
BAKERSFIELD ,CA, CA

WMUDS/SWAT **S103443123**
N/A

Relative:
Higher

Actual:
377 ft.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
Primary Waste:	MISCEL
Primary Waste Type:	Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	Not reported
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Private
Agency Name:	CHEVRON LAND & DEVELOPMENT CO.
Agency Department:	Not reported
Agency Address:	P.O. BOX 5545
Agency City,St,Zip:	BAKERSFIELD ,CA 93388
Agency Contact:	A. J. MAYHALL
Agency Telephone:	8053923311
Land Owner Name:	Not reported
Land Owner Address:	Not reported
Land Owner City,St,Zip:	Not reported
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	5F
Facility Type:	Agricultural - Facility that treats and/or disposes of the wastes

EVAPORATION BASIN (Continued) **S103443123**

	associated with confined and concentrated animal feeding, confined animal feeding, confined animal holding, confined and concentrated aquatic animal production facilities, and aquaculture. the treatment and/or disposal of agricultural return water is included in this category.
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported
Primary SIC:	0191
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	True
Solid Waste Assessment Test Program:	False
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	Not reported
Threat to Water Quality:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Sub Chapter 15:	True
Regional Board Project Officer:	ALT
Number of WMUDS at Facility:	1
Section Range:	Not reported
RCRA Facility:	No
Waste Discharge Requirements:	H
Self-Monitoring Rept. Frequency:	No Reporting Requirements
Waste Discharge System ID:	5D155005001
Solid Waste Information ID:	Not reported

D11 **JAKOV P DULCICH & SONS LLC** **HWTS** **S124895453**
WSW **14720 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93311**
0.623 mi.
3287 ft. **Site 1 of 2 in cluster D**

Relative: HWTS:
Higher

Name:	JAKOV P DULCICH & SONS LLC
Address:	14720 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93311
EPA ID:	CAL000384758
Inactive Date:	01/27/2017
Create Date:	04/19/2013
Last Act Date:	07/20/2017
Mailing Name:	Not reported
Mailing Address:	31956 PETERSON RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	MC FARLAND, CA 932509606
Owner Name:	JAKOV P DULCICH & SONS
Owner Address:	31956 PETERSON RD
Owner Address 2:	Not reported
Owner City,State,Zip:	MC FARLAND, CA 932509606
Contact Name:	JACOB MCCAA

Actual:
392 ft.

JAKOV P DULCICH & SONS LLC (Continued) **S124895453**

Contact Address: 31956 PETERSON ROAD
Contact Address 2: Not reported
City,State,Zip: MCFARLAND, CA 93250

NAICS:
EPA ID: CAL000384758
Create Date: 2013-04-19 14:17:03
NAICS Code: 99999
NAICS Description: Not Otherwise Specified
Issued EPA ID Date: 2013-04-19 14:17:03
Inactive Date: 2017-01-27 00:00:00
Facility Name: JAKOV P DULCICH & SONS LLC
Facility Address: 14720 COPUS RD
Facility Address 2: Not reported
Facility City: BAKERSFIELD
Facility County: 15
Facility State: CA
Facility Zip: 93311

D12 **JD&K FARM** **HAZNET** **S113468015**
WSW **14720 COPUS RD** **HWTS** **N/A**
1/2-1 **BAKERSFIELD, CA 93311**
0.623 mi.
3287 ft. **Site 2 of 2 in cluster D**

Relative:
Higher

Actual:
392 ft.

HAZNET:
Name: JD&K FARM
Address: 14720 COPUS RD
Address 2: Not reported
City,State,Zip: BAKERSFIELD, CA 933119404
Contact: JEREMY HENSON
Telephone: 6612050796
Mailing Name: Not reported
Mailing Address: 1912 GLENCAIRN CT

Year: 2010
Gepaid: CAL000352083
TSD EPA ID: CAD008302903
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 3.75

Additional Info:
Year: 2010
Gen EPA ID: CAL000352083

Shipment Date: 20100825
Creation Date: 10/26/2010 18:30:22
Receipt Date: 20100831
Manifest ID: 006389700JJK
Trans EPA ID: CAD980813950
Trans Name: CRANE'S WASTE OIL INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD008302903

JD&K FARM (Continued) **S113468015**

Trans Name:	VEOLIA ENVIRONMENTAL SERVICE
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3.75
Waste Quantity:	7500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	JD&K FARM
Address:	14720 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 933119404
EPA ID:	CAL000352083
Inactive Date:	06/30/2012
Create Date:	04/28/2010
Last Act Date:	04/02/2013
Mailing Name:	Not reported
Mailing Address:	1912 GLENCAIRN CT
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 933094275
Owner Name:	HENSON & SONS FARMS
Owner Address:	1912 GLENCAIRN CT
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 933094275
Contact Name:	JEREMY HENSON
Contact Address:	1912 GLENCAIRN CT
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 933094275

NAICS:

EPA ID:	CAL000352083
Create Date:	2010-04-28 14:25:34
NAICS Code:	99999
NAICS Description:	Not Otherwise Specified
Issued EPA ID Date:	2010-04-28 14:25:33
Inactive Date:	2012-06-30 00:00:00
Facility Name:	JD&K FARM
Facility Address:	14720 COPUS RD
Facility Address 2:	Not reported
Facility City:	BAKERSFIELD
Facility County:	15
Facility State:	CA
Facility Zip:	933119404

E13 **ANDREW AGG INC** **HAZNET** **S112952046**
ESE **13533 COPUS RD** **HWTS** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.627 mi.
3308 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
373 ft.

HAZNET:

Name:	ANDREW AGG INC
Address:	13533 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313
Contact:	MICHAEL ANDREWS
Telephone:	6619782500
Mailing Name:	Not reported
Mailing Address:	13650 COPUS RD
Year:	2006
Gepaid:	CAC002601345
TSD EPA ID:	AZC950823111
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	-
Tons:	25.284

Additional Info:

Year:	2006
Gen EPA ID:	CAC002601345
Shipment Date:	20060412
Creation Date:	7/27/2006 18:35:54
Receipt Date:	20060413
Manifest ID:	23789253
Trans EPA ID:	CAL000027542
Trans Name:	ABATECO
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZC950823111
Trans Name:	LA PAZ COUNTY LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	25.284
Waste Quantity:	30
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	ANDREW AGG INC
Address:	13533 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313
EPA ID:	CAC002601345

ANDREW AGG INC (Continued) **S112952046**

Inactive Date:	09/11/2006
Create Date:	03/14/2006
Last Act Date:	10/31/2006
Mailing Name:	Not reported
Mailing Address:	13650 COPUS RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 93313
Owner Name:	ANDREW AGG INC
Owner Address:	13650 COPUS RD
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 93313
Contact Name:	MICHAEL ANDREWS
Contact Address:	13650 COPUS RD
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313

E14 **LAKEVIEW BAPTIST CHURCH** **HWTS** **S124576654**
ESE **13533 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.627 mi.
3308 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
373 ft.

HWTS:

Name:	LAKEVIEW BAPTIST CHURCH
Address:	13533 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313
EPA ID:	CAC002568683
Inactive Date:	02/05/2004
Create Date:	08/08/2003
Last Act Date:	08/08/2003
Mailing Name:	Not reported
Mailing Address:	13533 COPUS RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 93313
Owner Name:	LAKEVIEW BAPTIST CHURCH
Owner Address:	13533 COPUS RD
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 93313
Contact Name:	CHARLES MCKAY
Contact Address:	13533 COPUS RD
Contact Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 93313

F15 **RAINBOW RANCH EVAP BASIN** **FINDS** **1023364694**
ESE **13650 COPUS** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.831 mi.
4387 ft. **Site 1 of 8 in cluster F**

Relative:
Higher

Actual:
370 ft.

FINDS:
Registry ID: 110066621560

Click Here:

Environmental Interest/Information System:
STATE MASTER

RAINBOW RANCH EVAP BASIN (Continued) **1023364694**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

F16 **ANDREWSAG INC** **CERS TANKS** **S124874196**
ESE **13650 COPUS RD** **CUPA Listings** **N/A**
1/2-1 **BAKERSFIELD, CA 93313** **CERS**
0.831 mi. **HWTS**
4387 ft. **Site 2 of 8 in cluster F**

Relative: Higher
Actual: 370 ft.

CERS TANKS:
Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Address: 13650 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93313
Site ID: 561022
CERS ID: 10232170
CERS Description: Aboveground Petroleum Storage

KERN CO CUPA:
Facility ID: FA0001254
CERS ID: 10232170
Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Address: 13650 COPUS RD
Address 2: 13650 COPUS RD
City,State,Zip: BAKERSFIELD, CA
Billing Status: Active, billable
Program Element: BUS PLAN SMALL LOW RISK 1 UNIT
Program Element Code: CB1T
HMIRRP Due Date: 2/28
Current Inspection Date: 04/01/2021
Employee: Elfstrom
Mailing Address: 13650 COPUS RD
Mailing Address 2: Not reported
Mailing City: BAKERSFIELD
Mailing State: CA
Mailing Zip: 93313

CERS:
Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Address: 13650 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93313
Site ID: 561022
CERS ID: 10232170
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 561022
Site Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Violation Date: 1/20/2017
Citation: 19 CCR 4.5 2745.10(b) - California Code of Regulations, Title 19, Chapter 4.5, Section(s) 2745.10(b)
Violation Description: Failure to revise, update, and submit the Risk Management Plan to the Administering Agency as follows: 1. At least once every five years from the date of its initial submission or most recent update required by section 2745.10(b)(2) through (7); 2. No later than three years after a newly regulated substance is first listed by the California Emergency Management Agency; 3. No later than the date on which on which a new regulated substance is first present in an already covered

ANDREWSAG INC (Continued) **S124874196**

process above a threshold quantity; 4. No later than the date on which a regulated substance is first present above a threshold quantity in a new process; 5. Within six months of a change that requires a revised process hazard analysis or hazard Review. 6. Within six months of a change that requires a revised offsite consequence analysis as provided in section 2750.7; 7. Within six months of a change that alters the program level that applied to any covered process.

Violation Notes: Returned to compliance on 07/06/2017.
Violation Division: Kern County Env Health Services Department
Violation Program: CalARP
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Maintain the accumulation start dates on the hazardous waste containers.
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-23-2016
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: 04-30-2014
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: 02-08-2019
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: 02-08-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: CalARP

ANDREWSAG INC (Continued) **S124874196**

Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-08-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Kern County Env Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-08-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	All chemicals have been removed from the site and all violations have been closed.
Eval Division:	Kern County Env Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-23-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	ANDREWS
Eval Division:	Kern County Env Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-30-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Kern County Env Health Services Department
Eval Program:	CalARP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-30-2014
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
Eval General Type:	Other/Unknown
Eval Date:	06-29-2017
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:	CalARP
Eval Source:	CERS

ANDREWSAG INC (Continued) **S124874196**

Eval General Type: Other/Unknown
Eval Date: 10-24-2016
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: CalARP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Resubmit the Hazardous Materials Business Plan and use March as the annual resubmittal date.
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-23-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: CalARP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Andrewsag
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-30-2014
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

Enforcement Action:
Site ID: 561022
Site Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Site Address: 13650 COPUS RD
Site City: BAKERSFIELD
Site Zip: 93313
Enf Action Date: 09-13-2017
Enf Action Type: AEO - Unified Program
Enf Action Description: Administrative Enforcement Order Based on the Unified Program Statute
Enf Action Notes: Fines/Penalties Assessed: $1,000.00.
Enf Action Division: Kern County Env Health Services Department

ANDREWSAG INC (Continued) **S124874196**

Enf Action Program: CalARP
Enf Action Source: CERS

Coordinates:
Site ID: 561022
Facility Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
Env Int Type Code: APSA
Program ID: 10232170
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 35.095830
Longitude: -119.103000

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: Esmeralda Hernandez
Entity Title: Safety Compliance
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: MARICOPA ORCHARDS, LLC - LAKEVIEW
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) 858-2881

Affiliation Type Desc: Document Preparer
Entity Name: ESMERALDA HERNANDEZ
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 13650 COPUS RD
Affiliation City: BAKERSFIELD
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93313
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: ESMERALDA HERNANDEZ

ANDREWSAG INC (Continued) **S124874196**

Entity Title:	Not reported
Affiliation Address:	13650 COPUS RD
Affiliation City:	BAKERSFIELD
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93313
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	MARICOPA ORCHARDS, LLC - LAKEVIEW
Entity Title:	Not reported
Affiliation Address:	13650 COPUS RD
Affiliation City:	BAKERSFIELD
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93313
Affiliation Phone:	(661) 858-2881
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:	Parent Corporation
Entity Name:	MARICOPA ORCHARDS LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HWTS:

Name:	ANDREWSAG INC
Address:	13650 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 933139676
EPA ID:	CAL000337712
Inactive Date:	06/30/2019
Create Date:	11/04/2008
Last Act Date:	10/08/2019
Mailing Name:	Not reported
Mailing Address:	13650 COPUS RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 933139676
Owner Name:	ANDREWSAG INC
Owner Address:	13650 COPUS RD
Owner Address 2:	Not reported
Owner City,State,Zip:	BAKERSFIELD, CA 933139676
Contact Name:	MARINA QUINTANA

ANDREWSAG INC (Continued) **S124874196**

Contact Address: 13650 COPUS ROAD
Contact Address 2: Not reported
City,State,Zip: BAKERSFIELD, CA 93313

NAICS:
EPA ID: CAL000337712
Create Date: 2008-11-04 14:33:04
NAICS Code: 336399
NAICS Description: All Other Motor Vehicle Parts Manufacturing
Issued EPA ID Date: 2008-11-04 14:33:04
Inactive Date: 2019-06-30 00:00:00
Facility Name: ANDREWSAG INC
Facility Address: 13650 COPUS RD
Facility Address 2: Not reported
Facility City: BAKERSFIELD
Facility County: 15
Facility State: CA
Facility Zip: 933139676

F17 **ANDREWSAG INC** **FINDS** **1023376571**
ESE **13650 COPUS RD** **ECHO** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.831 mi.
4387 ft. **Site 3 of 8 in cluster F**

Relative:
Higher

Actual:
370 ft.

FINDS:
Registry ID: 110066747514

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1023376571
Registry ID: 110066747514
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110066747514
Name: ANDREWSAG INC
Address: 13650 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93313

F18 **ANDREWSAG INC** **AST** **A100417147**
ESE **13650 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.831 mi.
4387 ft. **Site 4 of 8 in cluster F**

Relative: **Higher**

Actual: **370 ft.**

AST:

Name:	ANDREWSAG INC
Address:	13650 COPUS RD
City/Zip:	BAKERSFIELD,93313
Certified Unified Program Agencies:	Not reported
Owner:	ANDREWS AG INC
Total Gallons:	Not reported
CERSID:	10232170
Facility ID:	Not reported
Business Name:	ANDREWSAG INC
Phone:	(661) 858-2266
Fax:	(661) 858-2965
Mailing Address:	13650 COPUS RD
Mailing Address City:	BAKERSFIELD
Mailing Address State:	CA
Mailing Address Zip Code:	Not reported
Operator Name:	MICHAEL ANDREWS
Operator Phone:	(661) 978-2500
Owner Phone:	(661) 858-2266
Owner Mail Address:	13650 COPUS RD
Owner State:	CA
Owner Zip Code:	Not reported
Owner Country:	United States
Property Owner Name:	Michael Andrews
Property Owner Phone:	661-978-2500
Property Owner Mailing Address:	13650 Copus Road
Property Owner City:	Bakersfield
Property Owner Stat :	CA
Property Owner Zip Code:	93313
Property Owner Country:	United States
EPAID:	CAL000212628

F19 **ANDREWSAG INC** **RCRA NonGen / NLR** **1024821565**
ESE **13650 COPUS RD** **CAL000337712**
1/2-1 **BAKERSFIELD, CA 93313**
0.831 mi.
4387 ft. **Site 5 of 8 in cluster F**

Relative: **Higher**

Actual: **370 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	2008-11-04 00:00:00.0
Handler Name:	ANDREWSAG INC
Handler Address:	13650 COPUS RD
Handler City,State,Zip:	BAKERSFIELD, CA 93313-9676
EPA ID:	CAL000337712
Contact Name:	MICHAEL ANDREWS/CEO
Contact Address:	13650 COPUS ROAD
Contact City,State,Zip:	BAKERSFIELD, CA 93313
Contact Telephone:	661-858-2266
Contact Fax:	661-858-2965
Contact Email:	ANDREWSAG@MSN.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified

ANDREWSAG INC (Continued) **1024821565**

Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	13650 COPUS RD
Mailing City,State,Zip:	BAKERSFIELD, CA 93313-9676
Owner Name:	ANDREWSAG INC
Owner Type:	Other
Operator Name:	MICHAEL ANDREWS/CEO
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No

ANDREWSAG INC (Continued) **1024821565**

Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 20:30:47.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ANDREWSAG INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	13650 COPUS RD
Owner/Operator City,State,Zip:	BAKERSFIELD, CA 93313-9676
Owner/Operator Telephone:	661-858-2266
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MICHAEL ANDREWS/CEO
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	13650 COPUS ROAD
Owner/Operator City,State,Zip:	BAKERSFIELD, CA 93313
Owner/Operator Telephone:	661-858-2266
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2008-11-04 00:00:00.0
Handler Name:	ANDREWSAG INC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

ANDREWSAG INC (Continued) **1024821565**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

F20 **RAINBOW RANCH EVAP BASIN** **ENF** **S102003561**
ESE **13650 COPUS RD** **WDS** **N/A**
1/2-1 **BAKERSFIELD, CA 93313** **CIWQS**
0.831 mi. **CERS**
4387 ft. **Site 6 of 8 in cluster F**

Relative:
Higher

Actual:
370 ft.

ENF:

Name:	RAINBOW RANCH EVAP BASIN
Address:	13650 COPUS
City,State,Zip:	BAKERSFIELD, CA
Region:	Not reported
Facility Id:	251503
Agency Name:	Rainbow Ranches Inc
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Agricultural
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	35.094503
Place Longitude:	-119.108933
SIC Code 1:	191
SIC Desc 1:	General Farms, Primarily Crop
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0
Threat To Water Quality:	3
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Miscellaneous
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	WDR
Program Category1:	WDR
Program Category2:	WDR
# Of Programs:	1
WDID:	5D155003001
Reg Measure Id:	145042
Reg Measure Type:	WDR
Region:	Not reported

RAINBOW RANCH EVAP BASIN (Continued) **S102003561**

Order #:	93-154
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	12/28/2005
Effective Date:	08/06/1993
Expiration/Review Date:	08/05/1998
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	223551
Region:	Not reported
Order / Resolution Number:	94-510
Enforcement Action Type:	Admin Civil Liability
Effective Date:	04/22/1994
Adoption/Issuance Date:	04/22/1994
Achieve Date:	Not reported
Termination Date:	04/01/1995
ACL Issuance Date:	03/08/1994
EPL Issuance Date:	Not reported
Status:	Historical
Title:	ACLO 94-510 for Rainbow Ranches, Inc Evaporation Basin
Description:	$25,000 ACLO settles $25,000 ACLC 94-115 issued for failure to submit WMP, requires $5000 by 5/23/94 and suspends $20000 pending WMP completion by 4/1/95. Discharger complete WMP and paid $5,000 on 5/26/94.
Program:	WDR
Latest Milestone Completion Date:	4/1/1995
# Of Programs1:	1
Total Assessment Amount:	25000
Initial Assessed Amount:	25000
Liability $ Amount:	5000
Project $ Amount:	20000
Liability $ Paid:	5000
Project $ Completed:	20000
Total $ Paid/Completed Amount:	25000

WDS:

Name:	RAINBOW RANCH EVAP BASIN
Address:	13650 COPUS RD
City:	BAKERSFIELD
Facility ID:	Tulare Lake 155003001
Facility Type:	Agricultural - Facility that treats and/or disposes of the wastes associated with confined and concentrated animal feeding, confined

RAINBOW RANCH EVAP BASIN (Continued) **S102003561**

	animal feeding, confined animal holding, confined and concentrated aquatic animal production facilities, and aquaculture. the treatment and/or disposal of agricultural return water is included in this category.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	0
Facility Telephone:	Not reported
Facility Contact:	FRED ANDREWS
Agency Name:	RAINBOW RANCHES INC
Agency Address:	13650 COPUS RD
Agency City,St,Zip:	BAKERSFIELD 933139636
Agency Contact:	FRED ANDREWS
Agency Telephone:	Not reported
Agency Type:	Private
SIC Code:	191
SIC Code 2:	Not reported
Primary Waste Type:	Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Primary Waste:	MISCEL
Waste Type2:	Not reported
Waste2:	Miscellaneous (Includes wastes from dewatering, recreational lake overflow, swimming pool wastes, water ride wastewater, ground water seepage and other wastes of this type)
Primary Waste Type:	Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

CIWQS:

Name:	RAINBOW RANCH EVAP BASIN
Address:	13650 COPUS
City,State,Zip:	BAKERSFIELD, CA 93313
Agency:	Rainbow Ranches Inc
Agency Address:	13650 Copus Road, Bakersfield, CA 93313-9636
Place/Project Type:	Other
SIC/NAICS:	191

RAINBOW RANCH EVAP BASIN (Continued) **S102003561**

Region:	5F
Program:	WDR
Regulatory Measure Status:	Historical
Regulatory Measure Type:	WDR
Order Number:	93-154
WDID:	5D155003001
NPDES Number:	Not reported
Adoption Date:	8/6/1993
Effective Date:	08/06/1993
Termination Date:	Not reported
Expiration/Review Date:	08/05/1998
Design Flow:	0
Major/Minor:	Not reported
Complexity:	B
TTWQ:	3
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	35.094503
Longitude:	-119.108933

CERS:

Name:	RAINBOW RANCH EVAP BASIN
Address:	13650 COPUS
City,State,Zip:	BAKERSFIELD, CA 93313
Site ID:	347338
CERS ID:	251503
CERS Description:	Waste Discharge Requirements

Violations:

Site ID:	347338
Site Name:	Rainbow Ranch Evap Basin
Violation Date:	11/21/1994
Citation:	California Water Code
Violation Description:	Not reported
Violation Notes:	APPARENT DISCHARGE OUTSIDE EVAPORATION BASIN. FAILURE TO CONTAIN WASTE WITHIN DISPOSAL AREA SPECIFIED IN FINDING NO. 2 OF WDR 93-154. VIOLATION OF DISCHARGE SPEC B.1 OF WDR 93-154.
Violation Division:	Water Boards
Violation Program:	WDR
Violation Source:	CIWQS

Site ID:	347338
Site Name:	Rainbow Ranch Evap Basin
Violation Date:	12/5/1996
Citation:	California Water Code
Violation Description:	Not reported
Violation Notes:	DISCHARGE OUTSIDE OF PERMITTED AREA. FAILURE TO REPORT OVERFLOW IN A TIMELY MANNER. HOWEVER, CORRECTIVE MEASURES HAVE BEEN IMPLEMENTED - LEVEE RECONSTRUCTION AND DRAINAGE REDUCTION.
Violation Division:	Water Boards
Violation Program:	WDR
Violation Source:	CIWQS

Enforcement Action:

Site ID:	347338
Site Name:	Rainbow Ranch Evap Basin
Site Address:	13650 COPUS

RAINBOW RANCH EVAP BASIN (Continued) **S102003561**

Site City:	BAKERSFIELD
Site Zip:	93313
Enf Action Date:	04-22-1994
Enf Action Type:	Administrative Enforcement with Penality
Enf Action Description:	Administrative Enforcement with Civil Liability (Penality)
Enf Action Notes:	Not reported
Enf Action Division:	Water Boards
Enf Action Program:	UNSPEC
Enf Action Source:	CIWQS

F21 **RAINBOW RANCHER INC** **HWTS** **S124825343**
ESE **13650 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93301**
0.831 mi.
4387 ft. **Site 7 of 8 in cluster F**

Relative: **Higher**
Actual: **370 ft.**

HWTS:

Name:	RAINBOW RANCHER INC
Address:	13650 COPUS RD
Address 2:	Not reported
City,State,Zip:	BAKERSFIELD, CA 933010000
EPA ID:	CAL000212628
Inactive Date:	06/30/2002
Create Date:	06/20/2000
Last Act Date:	03/17/2003
Mailing Name:	Not reported
Mailing Address:	13650 COPUS ROAD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	BAKERSFIELD, CA 933139636
Owner Name:	RAINBOW RANCH INC
Owner Address:	=L
Owner Address 2:	Not reported
Owner City,State,Zip:	--, 99 --
Contact Name:	MICHAEL ANDREWS-CEO
Contact Address:	13650 COPUS ROAD
Contact Address 2:	Not reported
City,State,Zip:	--, 99 933139636

F22 **ANDREWSAG INC** **AST** **A100340100**
ESE **13650 COPUS** **N/A**
1/2-1 **BAKERSFIELD, CA**
0.831 mi.
4387 ft. **Site 8 of 8 in cluster F**

Relative: **Higher**
Actual: **370 ft.**

AST:

Name:	ANDREWSAG INC
Address:	13650 COPUS
City/Zip:	BAKERSFIELD,
Certified Unified Program Agencies:	Kern
Owner:	ANDREWS AG INC
Total Gallons:	7,750
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported

ANDREWSAG INC (Continued) **A100340100**

Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

G23 **JAKOV DULCICH & SONS LLC** **RCRA NonGen / NLR** **1025869637**
WSW **14900 COPUS RD** **CAL000413948**
1/2-1 **BAKERSFIELD, CA 93311**
0.856 mi.
4521 ft. **Site 1 of 5 in cluster G**

Relative:
Higher

Actual:
397 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2019-10-25 00:00:00.0
Handler Name:	JAKOV DULCICH & SONS LLC
Handler Address:	14900 COPUS RD
Handler City,State,Zip:	BAKERSFIELD, CA 93311
EPA ID:	CAL000413948
Contact Name:	CHAD CLARK
Contact Address:	PETERSON RD
Contact City,State,Zip:	MCFARLAND, CA 93250
Contact Telephone:	661-792-6360
Contact Fax:	661-792-6529
Contact Email:	CHADC@DULCICH.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	CA
State District:	CA
Mailing Address:	PETERSON RD
Mailing City,State,Zip:	MCFARLAND, CA 93250
Owner Name:	JAKOV DULCICH & SONS LLC
Owner Type:	Private
Operator Name:	JAKOV DULCICH & SONS LLC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No

JAKOV DULCICH & SONS LLC (Continued) **1025869637**

Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-11-05 15:24:03.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	JAKOV DULCICH & SONS LLC

JAKOV DULCICH & SONS LLC (Continued) **1025869637**

Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	31956 PETERSON RD
Owner/Operator City,State,Zip:	MCFARLAND, CA 93250
Owner/Operator Telephone:	661-792-6360
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	661-792-6529
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JAKOV DULCICH & SONS LLC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	31956 PETERSON RD
Owner/Operator City,State,Zip:	MCFARLAND, CA 93250
Owner/Operator Telephone:	661-792-6360
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	661-792-6529
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2019-10-25 00:00:00.0
Handler Name:	JAKOV DULCICH & SONS LLC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	CA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	111332
NAICS Description:	GRAPE VINEYARDS

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

G24 **JAKOV P. DULCICH AND SONS** **CERS HAZ WASTE** **S121741597**
WSW **14900 COPUS RD** **CERS TANKS** **N/A**
1/2-1 **BAKERSFIELD, CA 93311** **CUPA Listings**
0.856 mi. **CERS**
4521 ft. **Site 2 of 5 in cluster G**

Relative:
Higher

Actual:
397 ft.

CERS HAZ WASTE:
Name: JAKOV P. DULCICH AND SONS
Address: 14900 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93311
Site ID: 125456
CERS ID: 10469893
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: JAKOV P. DULCICH AND SONS
Address: 14900 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93311
Site ID: 125456
CERS ID: 10469893
CERS Description: Aboveground Petroleum Storage

KERN CO CUPA:
Facility ID: FA0039790
CERS ID: 10469893
Name: JAKOV P. DULCICH AND SONS
Address: 14900 COPUS RD
Address 2: 14900 Copus Rd
City,State,Zip: BAKERSFIELD, CA
Billing Status: Active, billable
Program Element: BUS PLAN SMALL LOW RISK 1 UNIT
Program Element Code: CB1T
HMIRRP Due Date: Not reported
Current Inspection Date: 05/01/2022
Employee: Elfstrom
Mailing Address: 31956 PETERSON ROAD
Mailing Address 2: Not reported
Mailing City: McFARLAND
Mailing State: CA
Mailing Zip: 93250

CERS:
Name: JAKOV P. DULCICH AND SONS
Address: 14900 COPUS RD
City,State,Zip: BAKERSFIELD, CA 93311
Site ID: 125456
CERS ID: 10469893
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 125456
Site Name: JAKOV P. DULCICH AND SONS
Violation Date: 6/20/2016
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.

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

Violation Notes:	Returned to compliance on 07/19/2016. The facility has not completed the annual hazardous material business plan submittal process on the California Environmental Reporting System (http://cers.calepa.ca.gov/). The last CERS submittal was in 05/08/2015. Please review and electronically certify that the hazardous materials business plan (HMBP) is complete, accurate, and up to date. This violation shall be corrected within 30 days.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	6/20/2016
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:	Returned to compliance on 07/19/2016. The facilities hazardous material/waste inventory was not accurate. Please update/include the following items on the California Environmental Reporting System (CERS). 1.) Propane - 500 gallons 2.) Used Oil Filters - 700 pounds 3.) Grease - 80 pounds 4.) Diesel - 10,000 gallons 5.) Pump Oil - 150 gallons 6.) Argo/CO2 mix - 200 cubic feet 7.) Any fertilizers/pesticides that stay on site longer that 30 days
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	5/3/2019
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:	At the time of the inspection the facility didi not have accumulation start dates on waste containers.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	5/3/2019
Citation:	40 CFR 1 265.171 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.171
Violation Description:	Failure to accumulate hazardous waste in a container that is in good condition.
Violation Notes:	At the time of the inspection the facility had waste oil and filters stored in unapproved containers.
Violation Division:	Kern County Env Health Services Department

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

Violation Program:	HW
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	5/3/2019
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:	All pesticides on site must be submitted on the business plan. At the time of the inspection non of the pesticides had been listed in the inventory submitted on 01/29/2019.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	6/20/2016
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 07/19/2016. The facilities Environmental Protection Agency (EPA) id number was not active. The EPA ID was inactivated on 12/04/2013. This violation shall be corrected within 30 days. Once this violation is corrected, please sign, date and submit the correction certificate at the end of this inspection report. This signed document may be submitted by fax at 1-661-862-8701 or by e-mail at saleenb@co.kern.ca.us.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	5/3/2019
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	At the time of the inspection all the waste oil tanks or containers except the newest tank was not closed.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	6/20/2016

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

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 08/29/2016. The employee training for the facility was not updated. A template of an updated employee training template was provided to the facility. Please maintain an updated copy of this plan on-site and submit a copy to the California Environmental Reporting System within 30 days.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	5/3/2019
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:	At the time of the inspection the facility had used oil filters stored in open buckets, milk crated, and open containers. Filters must be stored in a closed container with the appropriate labeling and accumulation start date.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	125456
Site Name:	JAKOV P. DULCICH AND SONS
Violation Date:	6/20/2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 07/19/2016. The facility did not have an updated site layout/facility map. Please maintain an updated copy of this map on-site and submit a copy to the California Environmental Reporting System (CERS) within 30 days. A template of the requirements may be found on the Kern County Environmental Health web page.
Violation Division:	Kern County Env Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-20-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Waste labels are beginning to show signs of disrepair. Please ensure all signs/written information are legible.
Eval Division:	Kern County Env Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

Eval Date:	05-03-2019
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:	05-03-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Kern County Env Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-20-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Please ensure that all aboveground tanks not in use are marked out of service/the date and properly disconnected.
Eval Division:	Kern County Env Health Services Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-20-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	CERS ER/Contingency Plan has incorrect contact information for Kern Co CUPA. The phone numbers listed should be 661-862-8740 and ER 24 hour line 661-549-9927. Please also add the Water Board number as well 559-445-5910. Once complete, reupload to CERS.
Eval Division:	Kern County Env Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-03-2019
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

Coordinates:

Site ID:	125456
Facility Name:	JAKOV P. DULCICH AND SONS
Env Int Type Code:	HWG
Program ID:	10469893
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	35.094060
Longitude:	-119.133240

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

Affiliation:

Affiliation Type Desc:	Legal Owner
Entity Name:	JAKOV P DULCICH AND SONS LLC
Entity Title:	Not reported
Affiliation Address:	31956 PETERSON ROAD
Affiliation City:	McFARLAND
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93250
Affiliation Phone:	(661) 792-6360

Affiliation Type Desc:	Operator
Entity Name:	JAKOV P. DULCICH
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) 301-4650

Affiliation Type Desc:	Parent Corporation
Entity Name:	JAKOV P DULCICH AND SONS LLC
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:	Peter Dulcich
Entity Title:	Owner/Operator
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:	CHAD CLARK
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

JAKOV P. DULCICH AND SONS (Continued) **S121741597**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	CHAD CLARK
Entity Title:	Not reported
Affiliation Address:	31956 PETERSON ROAD
Affiliation City:	McFARLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93250
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	31956 PETERSON ROAD
Affiliation City:	McFARLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93250
Affiliation Phone:	Not reported

G25 **JAKOV P. DULCICH AND SONS** **AST** **A100421101**
WSW **14900 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93311**
0.856 mi.
4521 ft. **Site 3 of 5 in cluster G**

Relative:
Higher

Actual:
397 ft.

AST:

Name:	JAKOV P. DULCICH AND SONS
Address:	14900 COPUS RD
City/Zip:	BAKERSFIELD,93311
Certified Unified Program Agencies:	Not reported
Owner:	JAKOV P DULCICH AND SONS LLC
Total Gallons:	Not reported
CERSID:	10469893
Facility ID:	Not reported
Business Name:	JAKOV P DULCICH AND SONS LLC
Phone:	(661) 792-6360
Fax:	Not reported
Mailing Address:	31956 PETERSON ROAD
Mailing Address City:	McFARLAND
Mailing Address State:	CA
Mailing Address Zip Code:	93250
Operator Name:	JAKOV P. DULCICH
Operator Phone:	(661) 301-4650
Owner Phone:	(661) 792-6360
Owner Mail Address:	31956 PETERSON ROAD
Owner State:	CA
Owner Zip Code:	93250
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

JAKOV P. DULCICH AND SONS (Continued) **A100421101**

Property Owner Stat : Not reported
Property Owner Zip Code: Not reported
Property Owner Country: Not reported
EPAID: CAC002742665

G26 **JAKOV P DULCICH & SONS LLC** **HWTS** **S126104598**
WSW **14900 COPUS RD** **N/A**
1/2-1 **BAKERSFIELD, CA 93311**
0.856 mi.
4521 ft. **Site 4 of 5 in cluster G**

Relative:
Higher

Actual:
397 ft.

HWTS:
Name: JAKOV P DULCICH & SONS LLC
Address: 14900 COPUS RD
Address 2: Not reported
City,State,Zip: BAKERSFIELD, CA 93311
EPA ID: CAL000413948
Inactive Date: Not reported
Create Date: 01/29/2016
Last Act Date: 11/05/2019
Mailing Name: Not reported
Mailing Address: 31956 PETERSON RD
Mailing Address 2: Not reported
Mailing City,State,Zip: MC FARLAND, CA 932509606
Owner Name: JAKOV P DULCICH & SONS LLC
Owner Address: 31956 PETERSON RD
Owner Address 2: Not reported
Owner City,State,Zip: MC FARLAND, CA 932509606
Contact Name: CHAD CLARK
Contact Address: 31956 PETERSON RD
Contact Address 2: Not reported
City,State,Zip: MC FARLAND, CA 932509606

NAICS:
EPA ID: CAL000413948
Create Date: 2016-01-29 14:45:04
NAICS Code: 111332
NAICS Description: Grape Vineyards
Issued EPA ID Date: 2016-01-29 14:45:04
Inactive Date: 2017-06-30 00:00:00
Facility Name: JAKOC P DULCICH & SONS LLC
Facility Address: 14900 COPUS RD
Facility Address 2: Not reported
Facility City: BAKERSFIELD
Facility County: 15
Facility State: CA
Facility Zip: 93311

G27
WSW
1/2-1
0.856 mi.
4521 ft.

JAKOV P. DULCICH AND SONS
14900 COPUS RD
BAKERSFIELD, CA 93311

Site 5 of 5 in cluster G

FINDS **1016875048**
ECHO **N/A**

Relative:
Higher

Actual:
397 ft.

FINDS:
Registry ID: 110059756946

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1016875048
Registry ID:	110059756946
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110059756946
Name:	JAKOV P. DULCICH AND SONS
Address:	14900 COPUS RD
City,State,Zip:	BAKERSFIELD, CA 93311

28
NNE
1/2-1
0.928 mi.
4898 ft.

WESTSIDE PARKWAY PHASE 4
MOHAWK ST TRUXTUN AVE
BAKERSFIELD, CA 93301

CIWQS **S111216878**
N/A

Relative:
Lower

Actual:
334 ft.

CIWQS:

Name:	WESTSIDE PARKWAY PHASE 4
Address:	MOHAWK ST TRUXTUN AVE
City,State,Zip:	BAKERSFIELD, CA 93301
Agency:	City of Bakersfield
Agency Address:	900 Truxtun Ave Suite 200, Bakersfield, CA 93301
Place/Project Type:	Construction - Transportation
SIC/NAICS:	Not reported
Region:	5F
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	5F15C360449
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	02/23/2011
Termination Date:	11/01/2013
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0

WESTSIDE PARKWAY PHASE 4 (Continued) **S111216878**

Violations within 5 years: 0
Latitude: 35.11111
Longitude: -119.11111

H29 **PG&E: LAKEVIEW SUBSTATION** **CUPA Listings** **S126202367**
ESE **COPUS ROAD & SCHALLOCK ROAD** **N/A**
1/2-1 **BAKERSFIELD, CA**
0.967 mi.
5108 ft. **Site 1 of 3 in cluster H**

Relative:
Lower

Actual:
364 ft.

KERN CO CUPA:
Facility ID: FA0004028
CERS ID: 10147409
Name: PG&E: LAKEVIEW SUBSTATION
Address: COPUS ROAD & SCHALLOCK ROAD
Address 2: Copus Road & Schallock Road
City,State,Zip: BAKERSFIELD, CA
Billing Status: Active, billable
Program Element: BUS PLAN MED LOW RISK 1 UNIT
Program Element Code: CB2T
HMIRRP Due Date: 7/31
Current Inspection Date: 06/01/2022
Employee: Elfstrom
Mailing Address: PO Box 7640
Mailing Address 2: Not reported
Mailing City: San Francisco
Mailing State: CA
Mailing Zip: 94120

H30 **PG&E LAKEVIEW SUBSTATION** **HAZNET** **S120987409**
ESE **COPUS ROAD & SCHALLOCK ROAD,** **HWTS** **N/A**
1/2-1 **BAKERSFIELD, CA 93311**
0.967 mi.
5108 ft. **Site 2 of 3 in cluster H**

Relative:
Lower

Actual:
364 ft.

HAZNET:
Name: PG&E LAKEVIEW SUBSTATION
Address: COPUS ROAD & SCHALLOCK ROAD,
Address 2: Not reported
City,State,Zip: BAKERSFIELD, CA 93311
Contact: LEAH UPCHURCH
Telephone: 2093239617
Mailing Name: Not reported
Mailing Address: PO BOX 7640

Year: 2016
Gepaid: CAC002841028
TSD EPA ID: ORQ000026715
CA Waste Code: 731 - Liquids with polychloronated biphenyls >= 50 Mg./L
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.29754

Additional Info:
Year: 2016

PG&E LAKEVIEW SUBSTATION (Continued) **S120987409**

Gen EPA ID:	CAC002841028
Shipment Date:	20151229
Creation Date:	10/13/2016 18:31:25
Receipt Date:	20160116
Manifest ID:	008701209JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD000026715
Trans Name:	TRANSFORMER TECHNOLOGIES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	731 - Liquids with polychlorinated biphenyls > 50 mg/l
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.80226
Waste Quantity:	728
Quantity Unit:	K
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151221
Creation Date:	9/27/2016 18:31:13
Receipt Date:	20150104
Manifest ID:	014902013JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZR000510479
Trans Name:	ARIZONA WASTE OIL SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	7.6
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	PG&E LAKEVIEW SUBSTATION
Address:	COPUS ROAD & SCHALLOCK ROAD,
Address 2:	BAKERSFIELD
City,State,Zip:	BAKERSFIELD, CA 93311
EPA ID:	CAC002841028

PG&E LAKEVIEW SUBSTATION (Continued) **S120987409**

Inactive Date:	03/12/2016
Create Date:	12/11/2015
Last Act Date:	08/31/2017
Mailing Name:	Not reported
Mailing Address:	PO BOX 7640
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SAN FRANCISCO, CA 941207640
Owner Name:	PACIFIC GAS & ELECTRIC
Owner Address:	PO BOX 7640
Owner Address 2:	Not reported
Owner City,State,Zip:	SAN FRANCISCO, CA 941207640
Contact Name:	LEAH UPCHURCH
Contact Address:	12626 JACKSON GATE RD
Contact Address 2:	Not reported
City,State,Zip:	JACKSON, CA 95642

NAICS:

EPA ID:	CAC002841028
Create Date:	2015-12-11 12:07:18
NAICS Code:	221122
NAICS Description:	Electric Power Distribution
Issued EPA ID Date:	2015-12-11 12:07:18
Inactive Date:	2016-03-12 03:00:33
Facility Name:	PG&E LAKEVIEW SUBSTATION
Facility Address:	COPUS ROAD & SCHALLOCK ROAD,
Facility Address 2:	BAKERSFIELD
Facility City:	BAKERSFIELD
Facility County:	15
Facility State:	CA
Facility Zip:	93311

H31 **PG&E: LAKEVIEW SUBSTATION** **FINDS** **1016717428**
ESE **COPUS ROAD & SCHALLOCK ROAD** **N/A**
1/2-1 **BAKERSFIELD, CA 93313**
0.967 mi.
5108 ft. **Site 3 of 3 in cluster H**

Relative:
Lower

Actual:
364 ft.

FINDS:
Registry ID: 110057103744

Click Here:

Environmental Interest/Information System:
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

I32
SSE
1/2-1
0.986 mi.
5205 ft.

CONOCO INC., RIO VIEJO LEASE
OLD RIVER RD (S OF COPUS RD) SEC. 34-T12N-R21W
BAKERSFIELD, CA 93311

Site 1 of 2 in cluster I

FINDS **1006834024**
N/A

Relative:
Higher

Actual:
400 ft.

FINDS:
Registry ID: 110013947104

Click Here:

Environmental Interest/Information System:
HAZARDOUS AIR POLLUTANT MAJOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

I33
SSE
1/2-1
0.986 mi.
5205 ft.

ARCO OIL AND GAS CO., RIO VIEJO SITE
BAKERSFIELD, CA

Site 2 of 2 in cluster I

FINDS **1007468927**
N/A

Relative:
Higher

Actual:
400 ft.

FINDS:
Registry ID: 110017433785

Click Here:

Environmental Interest/Information System:
US EPA RACT/BACT/LAER Clearinghouse (RBLC) database contains case-specific information on the "Best Available" air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources (e.g., power plants, steel mills, chemical plants, etc.). RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards. BACT, or Best Available Control Technology, is required on major new or modified sources in clean areas. LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

34
WSW
> 1
1.120 mi.
5915 ft.

CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCI
28 OF T12N R21W
BAKERSFIELD, CA 93311

CUPA Listings **S121737669**
CERS **N/A**

Relative:
Higher

Actual:
404 ft.

KERN CO CUPA:

Facility ID:	FA0041148
CERS ID:	10616662
Name:	CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILITY
Address:	28 OF T12N R21W
Address 2:	28 Of T12N R21W
City,State,Zip:	BAKERSFIELD, CA
Billing Status:	Active, billable
Program Element:	BUS PLAN LARGE LOW RISK 1 UNIT
Program Element Code:	CB3T
HMIRRP Due Date:	Not reported
Current Inspection Date:	04/01/2021

CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILIT (Continued) **S121737669**

Employee:	Elfstrom
Mailing Address:	900 Old River Road
Mailing Address 2:	Not reported
Mailing City:	Bakersfield
Mailing State:	CA
Mailing Zip:	93311

CERS:

Name:	CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILITY
Address:	28 OF T12N R21W
City,State,Zip:	BAKERSFIELD, CA 93311
Site ID:	104238
CERS ID:	10616662
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-03-2015
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:	Other/Unknown
Eval Date:	05-31-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	CRC Dulcich
Eval Division:	Kern County Env Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	California Resources Production Corporation
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	Esteban Solano
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address

CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILIT (Continued) **S121737669**

Entity Title:	Not reported
Affiliation Address:	900 Old River Road
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93311
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	California Resources Production Corporation
Entity Title:	Not reported
Affiliation Address:	900 Old River Road
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93311
Affiliation Phone:	(661) 412-5000
Affiliation Type Desc:	Operator
Entity Name:	CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILITY
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) 529-4366
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:	Environmental Contact
Entity Name:	WM. Douglas Shaffer PE
Entity Title:	Not reported
Affiliation Address:	900 Old River Road
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93311
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	California Resources Production Corporation
Entity Title:	Not reported
Affiliation Address:	900 Old River Road
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	93311
Affiliation Phone:	(661) 529-4366

CALIFORNIA RESOURCES PRODUCTION CORPORATION- DULCICH FACILIT (Continued) **S121737669**

Affiliation Type Desc:	Identification Signer
Entity Name:	Esteban Solano
Entity Title:	HES Technician
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

35
SE
> 1
1.188 mi.
6271 ft.

WATTS FARMING COMPANY INC
641 SCHALLOCK RD
BAKERSFIELD, CA 93313

RCRA NonGen / NLR **1024853189**
CAL000412690

Relative:
Higher

Actual:
389 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2020-01-23 00:00:00.0
Handler Name:	WATTS FARMING COMPANY INC
Handler Address:	641 SCHALLOCK RD
Handler City,State,Zip:	BAKERSFIELD, CA 93313-9648
EPA ID:	CAL000412690
Contact Name:	BARRY WATTS
Contact Address:	ALLEN RD STE 103
Contact City,State,Zip:	BAKERSFIELD, CA 93314
Contact Telephone:	661-735-5076
Contact Fax:	661-759-3000
Contact Email:	MELISSA@WATTSFARMING.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	ALLEN RD STE 103
Mailing City,State,Zip:	BAKERSFIELD, CA 93314
Owner Name:	WATTS FARMING COMPANY INC
Owner Type:	Other
Operator Name:	WATTS FARMING COMPANY INC
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No

WATTS FARMING COMPANY INC (Continued) **1024853189**

Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-01-31 13:00:18.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	WATTS FARMING COMPANY INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3559 ALLEN RD STE 103
Owner/Operator City,State,Zip:	BAKERSFIELD, CA 93314
Owner/Operator Telephone:	661-725-5076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

WATTS FARMING COMPANY INC (Continued) **1024853189**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	WATTS FARMING COMPANY INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3559 ALLEN RD STE 103
Owner/Operator City,State,Zip:	BAKERSFIELD, CA 93314
Owner/Operator Telephone:	661-725-5076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2020-01-23 00:00:00.0
Handler Name:	WATTS FARMING COMPANY INC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	111335
NAICS Description:	TREE NUT FARMING

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BAKERSFIELD	S107539655		OLD RIVER RD 1.5 N COPAS RD		CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/11/2021
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: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

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

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/06/2020
Next Scheduled EDR Contact: 01/25/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 87

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 87

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 07/27/2020
Date Data Arrived at EDR: 07/27/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/26/2020
Next Scheduled EDR Contact: 02/08/2021
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: 07/27/2020
Date Data Arrived at EDR: 07/27/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/26/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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 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 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: 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 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: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

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 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

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/27/2020
Date Data Arrived at EDR: 07/27/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/26/2020
Next Scheduled EDR Contact: 02/08/2021
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: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 74

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/27/2020
Date Data Arrived at EDR: 07/27/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/26/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 01/18/2021
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: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
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: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 08/03/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 78

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
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: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73
Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/23/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 86
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 06/30/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78
Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/18/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 08/05/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/21/2020
Number of Days to Update: 69

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/08/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/18/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Annually

ROD: Records Of Decision

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

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 07/24/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/21/2020
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/14/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
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: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
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: 08/05/2020
Date Data Arrived at EDR: 08/10/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 59

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 01/31/2021
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: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/04/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/24/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/27/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
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: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 09/10/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

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: 06/27/2020
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/28/2020
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/08/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2020
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 10/21/2020
Number of Days to Update: 65
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 74
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/23/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2020
Date Data Arrived at EDR: 06/05/2020
Date Made Active in Reports: 08/17/2020
Number of Days to Update: 73

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Annually

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: 08/19/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 14

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/18/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 08/05/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 79

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/05/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

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

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/06/2020
Date Data Arrived at EDR: 07/07/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 08/21/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 08/27/2020
Number of Days to Update: 6
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 08/20/2020
Next Scheduled EDR Contact: 12/28/2020
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: 06/06/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/09/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/28/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

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: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/15/2021
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: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 06/17/2020
Date Data Arrived at EDR: 06/18/2020
Date Made Active in Reports: 09/02/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 07/16/2020
Date Data Arrived at EDR: 07/22/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 78

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
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: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 78

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/13/2020
Number of Days to Update: 75

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/14/2020
Number of Days to Update: 76

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 71

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/06/2020
Date Data Arrived at EDR: 07/10/2020
Date Made Active in Reports: 09/28/2020
Number of Days to Update: 80

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/13/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/09/2020
Next Scheduled EDR Contact: 01/25/2021
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: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
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: 09/25/2020
Next Scheduled EDR Contact: 01/04/2021
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: 10/12/2020
Next Scheduled EDR Contact: 01/25/2021
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: 09/25/2020
Next Scheduled EDR Contact: 01/04/2021
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: 09/25/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/09/2020
Next Scheduled EDR Contact: 01/25/2021
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: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/05/2020
Next Scheduled EDR Contact: 02/01/2021
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: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/23/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 09/23/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/13/2020
Number of Days to Update: 75

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 06/10/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/19/2020
Number of Days to Update: 77
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/02/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 79
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 07/01/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/19/2020
Number of Days to Update: 77
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/10/2020
Date Made Active in Reports: 08/24/2020
Number of Days to Update: 75
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64
Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 08/04/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 78
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 08/04/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 82
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 08/31/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/03/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 78

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

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: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 08/03/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 82

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 07/27/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/11/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/01/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 07/30/2020
Date Data Arrived at EDR: 07/31/2020
Date Made Active in Reports: 10/16/2020
Number of Days to Update: 77

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 08/25/2020
Date Data Arrived at EDR: 08/26/2020
Date Made Active in Reports: 09/16/2020
Number of Days to Update: 21

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/07/2020
Date Data Arrived at EDR: 07/08/2020
Date Made Active in Reports: 09/25/2020
Number of Days to Update: 79

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
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: 07/01/2020
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 08/11/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 08/06/2020
Date Data Arrived at EDR: 08/06/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 81

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 07/10/2020
Date Data Arrived at EDR: 07/22/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 78

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
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: 09/23/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 07/10/2020
Date Data Arrived at EDR: 07/22/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 77

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/23/2020
Date Data Arrived at EDR: 06/29/2020
Date Made Active in Reports: 09/15/2020
Number of Days to Update: 78

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 08/06/2020
Date Data Arrived at EDR: 08/07/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 80

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 11/23/2020
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: 10/09/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/02/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

JASMINE SOLAR PROJECT
JASMINE SOLAR PROJECT
BAKERSFIELD, CA 93311

TARGET PROPERTY COORDINATES

Latitude (North):	35.098569 - 35° 5' 54.85''
Longitude (West):	119.117036 - 119° 7' 1.33''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	307029.4
UTM Y (Meters):	3885826.8
Elevation:	370 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5639469 COAL OIL CANYON, CA
Version Date:	2012
Northeast Map:	5639068 CONNER, CA
Version Date:	2012
Southwest Map:	5639471 CONNER SW, CA
Version Date:	2012
Northwest Map:	5639501 MILLUX, 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).

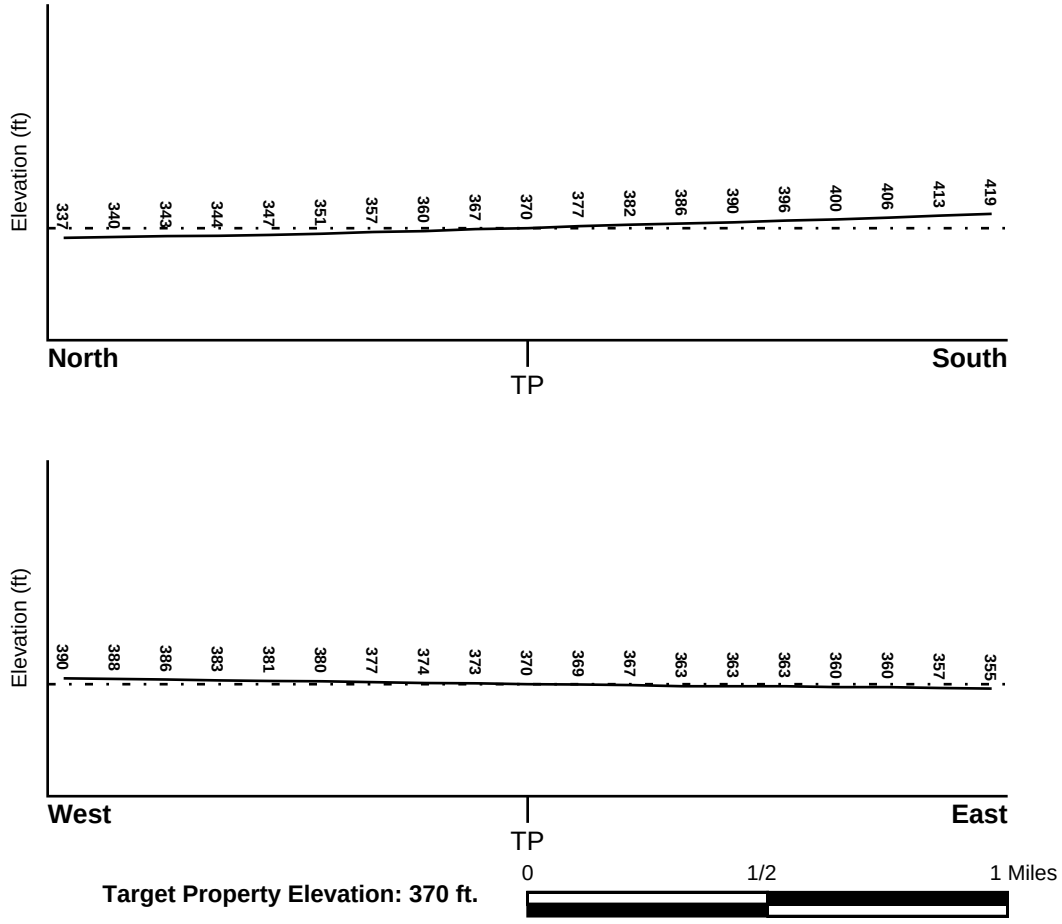
TOPOGRAPHIC INFORMATION

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 NNE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06029C3125E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06029C3100E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
COAL OIL CANYON	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
A1	USGS40000160574	1/4 - 1/2 Mile NW
B2	USGS40000160498	1/4 - 1/2 Mile ESE
4	USGS40000160438	1/4 - 1/2 Mile South
B7	USGS40000160493	1/4 - 1/2 Mile ESE
C8	USGS40000160437	1/4 - 1/2 Mile SSE
D13	USGS40000160492	1/2 - 1 Mile ESE
16	USGS40000160484	1/2 - 1 Mile WSW
E18	USGS40000160652	1/2 - 1 Mile NNE
19	USGS40000160388	1/2 - 1 Mile South
F22	USGS40000160397	1/2 - 1 Mile SSE
F23	USGS40000160396	1/2 - 1 Mile SSE
24	USGS40000160518	1/2 - 1 Mile West
26	USGS40000160486	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
D11	CA1502154	1/2 - 1 Mile ESE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B3	CADWR8000015981	1/4 - 1/2 Mile SE
C5	CADWR8000015944	1/4 - 1/2 Mile South
A6	CADWR8000016045	1/4 - 1/2 Mile NW
9	CADWR8000016041	1/4 - 1/2 Mile NE
D10	CADWR8000015980	1/2 - 1 Mile ESE
D12	CADWR8000015969	1/2 - 1 Mile ESE
14	CADWR8000016006	1/2 - 1 Mile East
15	CADWR8000016113	1/2 - 1 Mile North

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

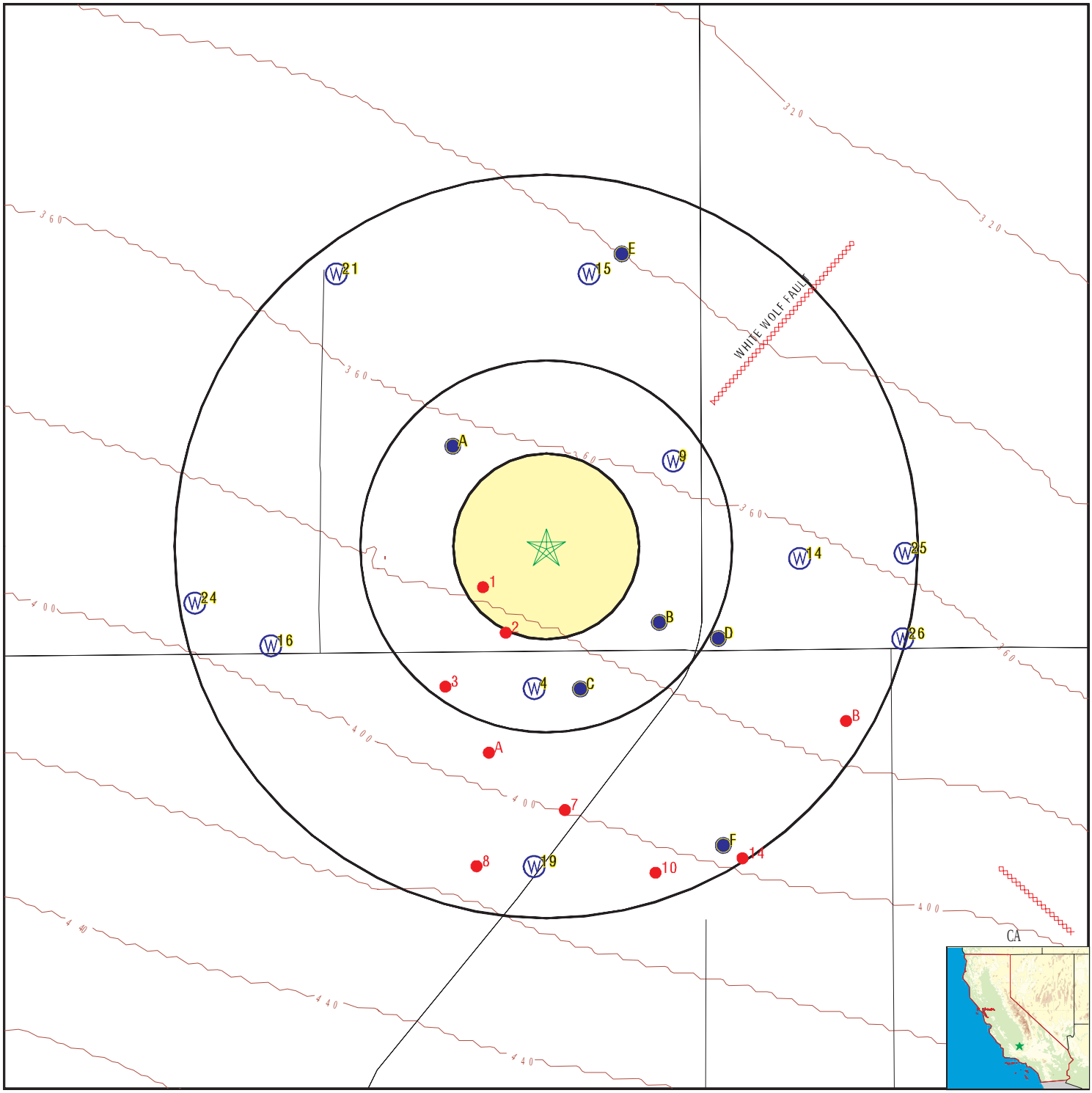
MAP ID	WELL ID	LOCATION FROM TP
E17	CADWR8000016125	1/2 - 1 Mile NNE
F20	CADWR8000015912	1/2 - 1 Mile SSE
21	CADWR8000016114	1/2 - 1 Mile NW
25	CADWR8000016008	1/2 - 1 Mile East

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG13000004430	1/8 - 1/4 Mile WSW
2	CAOG13000234732	1/4 - 1/2 Mile SSW
3	CAOG13000003867	1/4 - 1/2 Mile SW
A5	CAOG13000202196	1/2 - 1 Mile SSW
A4	CAOG13000202222	1/2 - 1 Mile SSW
A6	CAOG13000202215	1/2 - 1 Mile SSW
7	CAOG13000202218	1/2 - 1 Mile South
8	CAOG13000202216	1/2 - 1 Mile SSW
B9	CAOG13000236655	1/2 - 1 Mile ESE
10	CAOG13000202217	1/2 - 1 Mile SSE
B11	CAOG13000236656	1/2 - 1 Mile ESE
B12	CAOG13000236652	1/2 - 1 Mile ESE
B13	CAOG13000236650	1/2 - 1 Mile ESE
14	CAOG13000202212	1/2 - 1 Mile SSE

PHYSICAL SETTING SOURCE MAP - 06246888.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Jasmine Solar Project	CLIENT:	Rincon
ADDRESS:	Jasmine Solar Project Bakersfield CA 93311	CONTACT:	Lauren Roenicke
		INQUIRY #:	06246888.2r
LAT/LONG:	35.098569 / 119.117036	DATE:	October 29, 2020 3:35 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NW
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000160574**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E31G001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	701
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-12-03
Feet below surface:	175.50	Feet to sea level:	Not Reported
Note:	Not Reported		

B2
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000160498**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E32N002M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	500
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

B3
SE
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR8000015981**

State Well #:	32S27E32N004M	Station ID:	21807
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
South
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000160438**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012N021W27N001S	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1020
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-01-29
Feet below surface:	248.50	Feet to sea level:	Not Reported
Note:	Not Reported		

C5
South
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR8000015944**

State Well #:	12N21W27N002S	Station ID:	33858
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

A6
NW
1/4 - 1/2 Mile
Lower

CA WELLS **CADWR8000016045**

State Well #:	32S27E31G001M	Station ID:	21427
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

B7
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000160493**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E32N004M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported

Construction Date:	Not Reported	Well Depth:	40
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1957-02-14
Feet below surface:	34.10	Feet to sea level:	Not Reported
Note:	Not Reported		

C8
SSE **FED USGS** **USGS40000160437**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012N021W27N002S	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1482
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-12-03
Feet below surface:	263.60	Feet to sea level:	Not Reported
Note:	Not Reported		

9
NE **CA WELLS** **CADWR8000016041**
1/4 - 1/2 Mile
Lower

State Well #:	32S27E31H061M	Station ID:	38040
Well Name:	Not Reported	Well Use:	Not Reported
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

D10
ESE **CA WELLS** **CADWR8000015980**
1/2 - 1 Mile
Higher

State Well #:	32S27E32N003M	Station ID:	21806
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D11
ESE
1/2 - 1 Mile
Higher

FRDS PWS **CA1502154**

Epa region:	09	State:	CA
Pwsid:	CA1502154	Pwsname:	LAKESIDE SCHOOL
Cityserved:	Not Reported	Stateserved:	CA
Zipserved:	Not Reported	Fipscounty:	06029
Status:	Active	Retpopsrvd:	800
Pwssvcconn:	1	Psource longname:	Groundwater
Pwstype:	NTNCWS	Owner:	Local_Govt
Contact:	MULLEN, GARY J.	Contactorgname:	MULLEN, GARY J.
Contactphone:	661-836-6658	Contactaddress1:	1435 OLD RIVER ROAD
Contactaddress2:	Not Reported	Contactcity:	BAKERSFIELD
Contactstate:	CA	Contactzip:	93311
Pwsactivitycode:	A		

Pwsid:	CA1502154	Facid:	3
Facname:	WELL 02 - CL2 TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, pre	Factypecode:	TP

Pwsid:	CA1502154	Facid:	5286
Facname:	WELL 02 - CL2 TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, pre	Factypecode:	TP

PWS ID:	CA1502154	PWS type:	System Owner/Responsible Party
PWS name:	LAKESIDE SCHOOL	PWS address:	Not Reported
PWS city:	LAKESIDE	PWS state:	CA
PWS zip:	94234	PWS name:	LAKESIDE SCHOOL
PWS type code:	NTNC	Retail population served:	800
Contact:	Dean Bentley	Contact address:	14535 OLD RIVER ROAD
Contact address:	BAKERSFIELD	Contact city:	CA
Contact state:	93	Contact zip:	6613433420
Contact telephone:	Not Reported		

PWS ID:	CA1502154	Activity status:	Active
Date system activated:	8404	Date system deactivated:	Not Reported
Retail population:	00000460	System name:	LAKESIDE SCHOOL WATER SYSTEM
System address:	LAKESIDE SCHOOL	System address:	SHAFTER
System city:	BAKERSFIELD	System state:	CA
System zip:	93311		

Population served:	501 - 1,000 Persons	Treatment:	Untreated

Latitude:	350540	Longitude:	1190630

Violation id:	1019008	Orig code:	S
State:	CA	Violation Year:	2009
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.016	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2009
Cmp edt:	12/31/2009		

Violation id:	1019009	Orig code:	S
State:	CA	Violation Year:	2010

Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.0163	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	01/01/2010
Cmp edt:	03/31/2010		

Violation id:	1019010	Orig code:	S
State:	CA	Violation Year:	2010
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.016	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	04/01/2010
Cmp edt:	06/30/2010		

Violation id:	1019011	Orig code:	S
State:	CA	Violation Year:	2010
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	07/01/2010
Cmp edt:	09/30/2010		

Violation id:	1119012	Orig code:	S
State:	CA	Violation Year:	2010
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2010
Cmp edt:	12/31/2010		

Violation id:	1119013	Orig code:	S
State:	CA	Violation Year:	2011
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	01/01/2011
Cmp edt:	03/31/2011		

Violation id:	1119014	Orig code:	S
State:	CA	Violation Year:	2011
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	04/01/2011
Cmp edt:	06/30/2011		

Violation id:	1119015	Orig code:	S
State:	CA	Violation Year:	2011
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	07/01/2011
Cmp edt:	09/30/2011		

Violation id:	1119017	Orig code:	S

State:	CA	Violation Year:	2012
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	01/01/2012
Cmp edt:	03/31/2012		

Violation id:	1219016	Orig code:	S
State:	CA	Violation Year:	2011
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2011
Cmp edt:	12/31/2011		

Violation id:	1219018	Orig code:	S
State:	CA	Violation Year:	2012
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	04/01/2012
Cmp edt:	06/30/2012		

Violation id:	1219019	Orig code:	S
State:	CA	Violation Year:	2012
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	07/01/2012
Cmp edt:	09/30/2012		

Violation id:	819003	Orig code:	S
State:	CA	Violation Year:	2008
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	332	Rule name:	Arsenic
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2008
Cmp edt:	03/31/2008		

Violation id:	919002	Orig code:	S
State:	CA	Violation Year:	2008
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.02	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	919004	Orig code:	S
State:	CA	Violation Year:	2008
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	332	Rule name:	Arsenic
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	09/30/2008		

Violation id:	919005	Orig code:	S
State:	CA	Violation Year:	2008
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	332	Rule name:	Arsenic
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	919006	Orig code:	S
State:	CA	Violation Year:	2009
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.016	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	04/01/2009
Cmp edt:	06/30/2009		

Violation id:	919007	Orig code:	S
State:	CA	Violation Year:	2009
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	07/01/2009
Cmp edt:	09/30/2009		

Violation id:	9712002	Orig code:	S
State:	CA	Violation Year:	2012
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.017	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2012
Cmp edt:	12/31/2012		

Violation id:	9712003	Orig code:	S
State:	CA	Violation Year:	2013
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	01/01/2013
Cmp edt:	03/31/2013		

Violation id:	9712004	Orig code:	S
State:	CA	Violation Year:	2012
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2012
Cmp edt:	12/31/2012		

Violation id:	9712005	Orig code:	S
State:	CA	Violation Year:	2013
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.019	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	04/01/2013
Cmp edt:	06/30/2013		

Violation id:	9712006	Orig code:	S
State:	CA	Violation Year:	2009
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2009
Cmp edt:	Not Reported		

Violation id:	9712007	Orig code:	S
State:	CA	Violation Year:	2013
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	07/01/2013
Cmp edt:	09/30/2013		

Violation id:	9712008	Orig code:	S
State:	CA	Violation Year:	2013
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	10/01/2013
Cmp edt:	12/31/2013		

Violation id:	999002	Orig code:	S
State:	CA	Violation Year:	2009
Contamination code:	1005	Contamination Name:	Arsenic
Violation code:	02	Violation name:	MCL, Average
Rule code:	332	Rule name:	Arsenic
Violation measur:	0.018	Unit of measure:	MG/L
State mcl:	0.01	Cmp bdt:	01/01/2009
Cmp edt:	03/31/2009		

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	94V0001	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	LEAD & COPPER RULE
Violation type:	Initial Tap Sampling for Pb and Cu		
Violation start date:	070193	Violation end date:	123193
Violation period (months):	006	Violation awareness date:	Not Reported
Major violator:	Not Reported	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

Violation ID:	1019008	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	1019009	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	1019010	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	1019011	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1119012	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1119013	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1119014	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1119015	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1119017	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1219016	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1219018	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	1219019	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	819003	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	919002	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	919004	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	919005	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009

Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	919006	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	919007	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712002	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712003	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712004	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	06/27/2013
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712005	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712006	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	09/13/2013
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	9712006	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	09/13/2013
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9712007	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9712008	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	999002	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/23/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	Not Reported	Orig Code:	F
Enforcemnt FY:	2000	Enforcement Action:	03/01/2000
Enforcement Detail:	Fed Compliance achieved	Enforcement Category:	Not Reported
PWS name:	LAKESIDE SCHOOL	Population served:	800

PWS type code:	NTNC	Violation ID:	0819003
Contaminant:	ARSENIC	Violation type:	3
Compliance start date:	1/1/2008 0:00:00	Compliance end date:	3/31/2008 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	Not Reported		

PWS name:	LAKESIDE SCHOOL	Population served:	800
PWS type code:	NTNC	Violation ID:	0919002
Contaminant:	ARSENIC	Violation type:	2
Compliance start date:	10/1/2008 0:00:00	Compliance end date:	12/31/2008 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	0.02		

PWS name:	LAKESIDE SCHOOL	Population served:	800
PWS type code:	NTNC	Violation ID:	0919005
Contaminant:	ARSENIC	Violation type:	3
Compliance start date:	10/1/2008 0:00:00	Compliance end date:	12/31/2008 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	Not Reported		

D12
ESE
1/2 - 1 Mile
Higher

CA WELLS **CADWR8000015969**

State Well #:	32S27E32N001M	Station ID:	21429
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

D13
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS40000160492**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E32N001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	998
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

14
East
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000016006**

State Well #:	32S27E32L002M	Station ID:	21428
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

15
North
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000016113**

State Well #:	32S27E30R061M	Station ID:	24858
Well Name:	Not Reported	Well Use:	Not Reported
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

16
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000160484**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E31N001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	600
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-01-28
Feet below surface:	21.80	Feet to sea level:	Not Reported
Note:	Not Reported		

E17
NNE
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000016125**

State Well #:	32S27E30R001M	Station ID:	35212
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

E18
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000160652**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E30R001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported

Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1956-09-13
Feet below surface:	19.40	Feet to sea level:	Not Reported
Note:	Not Reported		

19
South **FED USGS** **USGS40000160388**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012N021W34E001S	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

F20
SSE **CA WELLS** **CADWR8000015912**
1/2 - 1 Mile
Higher

State Well #:	12N21W34G002S	Station ID:	15236
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

21
NW **CA WELLS** **CADWR8000016114**
1/2 - 1 Mile
Lower

State Well #:	32S27E30N001M	Station ID:	21426
Well Name:	32S27E30N001M	Well Use:	Unknown
Well Type:	Single Well	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

F22
SSE **FED USGS** **USGS40000160397**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012N021W34B001S	Type:	Well
Description:	Not Reported	HUC:	18030012

Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1160
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-12-05
Feet below surface:	234.20	Feet to sea level:	Not Reported
Note:	Not Reported		

F23
SSE **FED USGS** **USGS40000160396**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012N021W34G002S	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1197
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-12-05
Feet below surface:	294.30	Feet to sea level:	Not Reported
Note:	Not Reported		

24
West **FED USGS** **USGS40000160518**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S026E36Q001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	540
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1958-12-03
Feet below surface:	134.90	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
CA WELLS	**CADWR8000016008**

25
East
1/2 - 1 Mile
Lower

State Well #:	32S27E32L001M	Station ID:	35213
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Kern County	Well Completion Rpt #:	Not Reported

26
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000160486**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	032S027E32Q001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	702
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW **OIL_GAS** **CAOG13000004430**
1/8 - 1/4 Mile

API #:	0403022736	Well #:	47X-31
Well Status:	Canceled	Well Type:	OG
Operator Name:	PYR Energy Corporation	Lease Name:	Blizzard
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	mip	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

2
SSW **OIL_GAS** **CAOG13000234732**
1/4 - 1/2 Mile

API #:	0403063655	Well #:	1-31
Well Status:	New	Well Type:	OG
Operator Name:	Grapevine Energy, LLC	Lease Name:	Bordeaux
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	Y
Directionally Drilled:	N	SPUD Date:	Not Reported

3
SW **OIL_GAS** **CAOG13000003867**
1/4 - 1/2 Mile

API #:	0402956431	Well #:	77X-28
Well Status:	Plugged	Well Type:	DH
Operator Name:	Arco Western Energy Co.	Lease Name:	Tenneco-Chevron-Rio Viejo
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

A5
SSW **OIL_GAS** **CAOG13000202196**
1/2 - 1 Mile

API #:	0403051827	Well #:	28-1
Well Status:	Canceled	Well Type:	OG
Operator Name:	Century Exploration Resources, LLC		
Lease Name:	Century-Maricopa Orchards	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	Notice of Intent to Drill
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

Map ID
Direction
Distance

Database EDR ID Number

A4
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000202222**

API #:	0403051865	Well #:	28-1
Well Status:	Canceled	Well Type:	OG
Operator Name:	Century Exploration Resources, LLC		
Lease Name:	Lease by Century Exploration Resources, LLC		
Field Name:	Rio Viejo	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

A6
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000202215**

API #:	0402953924	Well #:	81X
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	09/14/1976		

7
South
1/2 - 1 Mile

OIL_GAS **CAOG13000202218**

API #:	0402951245	Well #:	22X
Well Status:	Active	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

8
SSW
1/2 - 1 Mile

OIL_GAS **CAOG13000202216**

API #:	0402952295	Well #:	83X
Well Status:	Plugged	Well Type:	OG
Operator Name:	Arco Western Energy Co.	Lease Name:	Tenneco-Standard-San Emidio No
Field Name:	Rio Viejo	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

B9
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000236655**

API #:	0403065337	Well #:	41X-27
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	Notice of Intent to Drill
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	Not Reported		

10
SSE
1/2 - 1 Mile

OIL_GAS **CAOG13000202217**

API #:	0402952487	Well #:	34X
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	GPS
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	Not Reported		

B11
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000236656**

API #:	0403065338	Well #:	42X-34
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	Notice of Intent to Drill
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	Not Reported		

B12
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000236652**

API #:	0403065334	Well #:	62X-27
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	Notice of Intent to Drill
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

B13
ESE
1/2 - 1 Mile

OIL_GAS **CAOG13000236650**

API #:	0403065332	Well #:	81X-34
Well Status:	New	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	GIS Source:	Notice of Intent to Drill
Confidential Well:	N	Directionally Drilled:	Y
SPUD Date:	Not Reported		

14
SSE
1/2 - 1 Mile

OIL_GAS **CAOG13000202212**

API #:	0402954568	Well #:	53X
Well Status:	Idle	Well Type:	OG
Operator Name:	California Resources Production Corporation		
Lease Name:	Rio Viejo	Field Name:	Rio Viejo
Area Name:	Any Area	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
93311	18	0

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: 93311

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.800 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix C

Historical Research Documentation

Jasmine Solar Project

Jasmine Solar Project

Bakersfield, CA 93311

Inquiry Number: 6246888.8

October 29, 2020

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

10/29/20

Site Name:	Client Name:
Jasmine Solar Project	Rincon
Jasmine Solar Project	180 North Ashwood Avenue
Bakersfield, CA 93311	Ventura, CA 93003-0000
EDR Inquiry # 6246888.8	Contact: Lauren Roenicke

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Rincon 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:		*Coordinates:*	
P.O.#	NA	**Latitude:**	35.098569 35° 5' 55" North
Project:	20-09824	**Longitude:**	-119.117036 -119° 7' 1" West
		UTM Zone:	Zone 11 North
		UTM X Meters:	307033.91
		UTM Y Meters:	3886024.44
		Elevation:	370.00' above sea level

Maps Provided:

2012	1910
1973	
1968	
1955	
1950	
1933, 1934	
1931	
1912	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Coal Oil Canyon
2012
7.5-minute, 24000

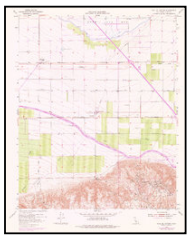


Conner SW
2012
7.5-minute, 24000

1973 Source Sheets



Conner SW
1973
7.5-minute, 24000
Aerial Photo Revised 1973



Coal Oil Canyon
1973
7.5-minute, 24000
Aerial Photo Revised 1973

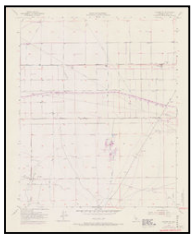


COAL OIL CANYON
1973
7.5-minute, 24000

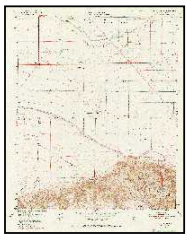
1968 Source Sheets



Coal Oil Canyon
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Conner SW
1968
7.5-minute, 24000
Aerial Photo Revised 1968



COAL OIL CANYON
1968
7.5-minute, 24000

1955 Source Sheets



Conner SW
1955
7.5-minute, 24000
Aerial Photo Revised 1952



Coal Oil Canyon
1955
7.5-minute, 24000
Aerial Photo Revised 1952

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets



Coal Oil Canyon
1950
7.5-minute, 24000

1933, 1934 Source Sheets



Hayes Ranch
1933
7.5-minute, 31680



Coal Oil Canyon
1934
7.5-minute, 31680

1931 Source Sheets



Hayes Ranch
1931
7.5-minute, 31680

1912 Source Sheets



Buena Vista Lake
1912
30-minute, 125000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

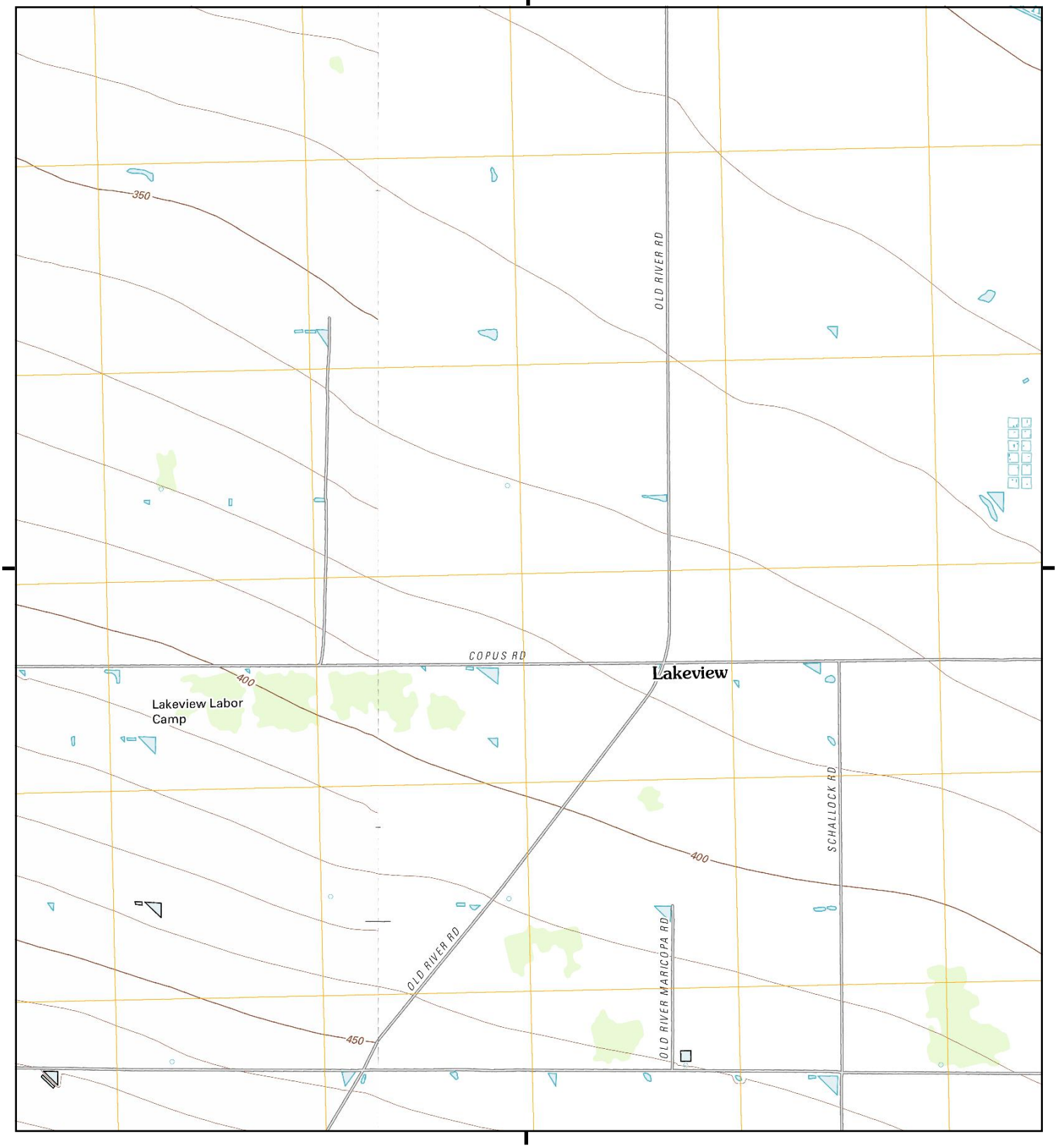
1910 Source Sheets



Buena Vista Lake
1910
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, Coal Oil Canyon, 2012, 7.5-minute
SW, Conner SW, 2012, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N

Historical Topo Map

1973



This report includes information from the following map sheet(s).

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W E
SW S SE

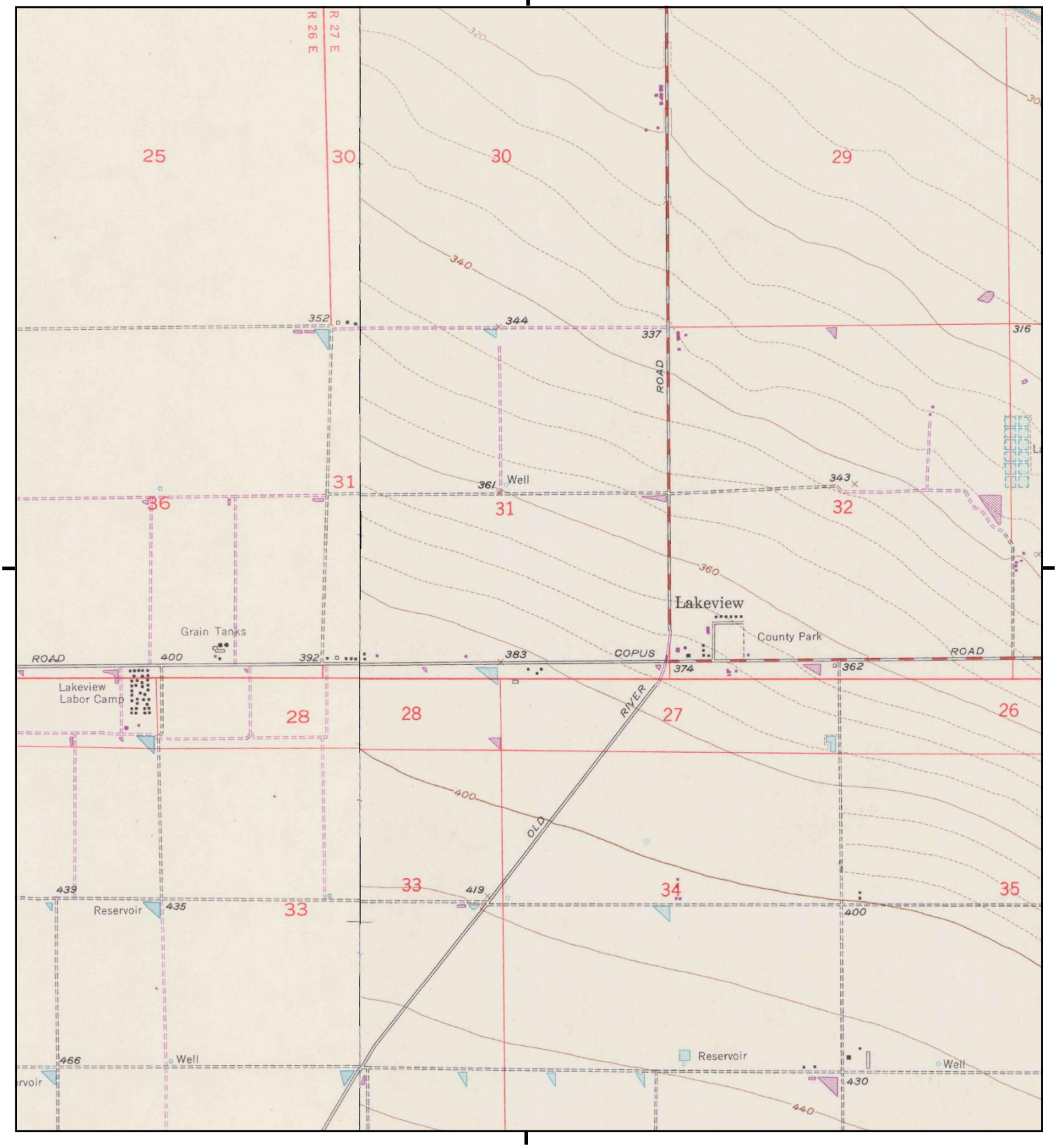
TP, Coal Oil Canyon, 1973, 7.5-minute
SW, Conner SW, 1973, 7.5-minute
TP, COAL OIL CANYON, 1973, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N

Historical Topo Map

1968



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

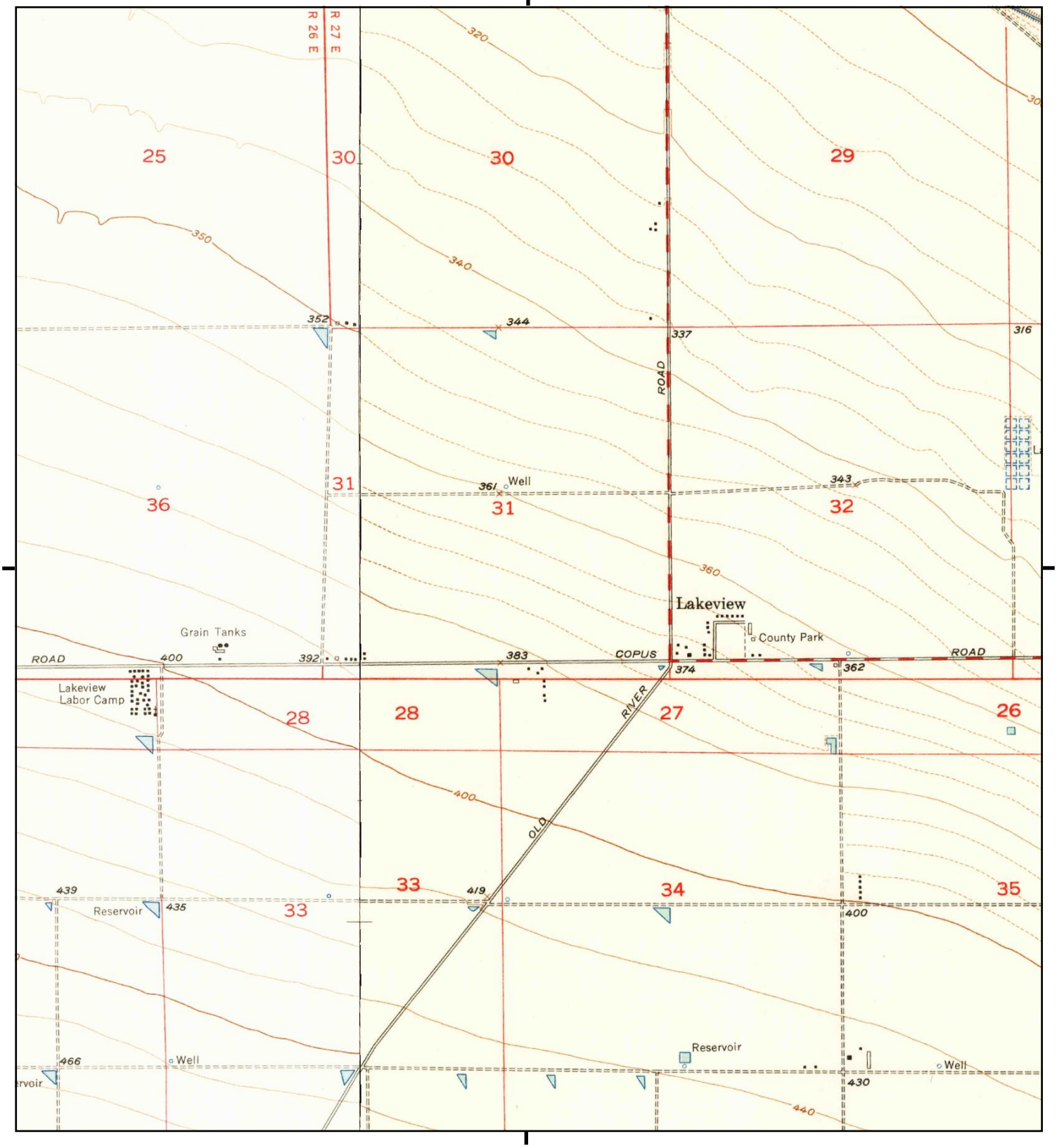
TP, Coal Oil Canyon, 1968, 7.5-minute
SW, Conner SW, 1968, 7.5-minute
TP, COAL OIL CANYON, 1968, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N

Historical Topo Map

1955



This report includes information from the following map sheet(s).

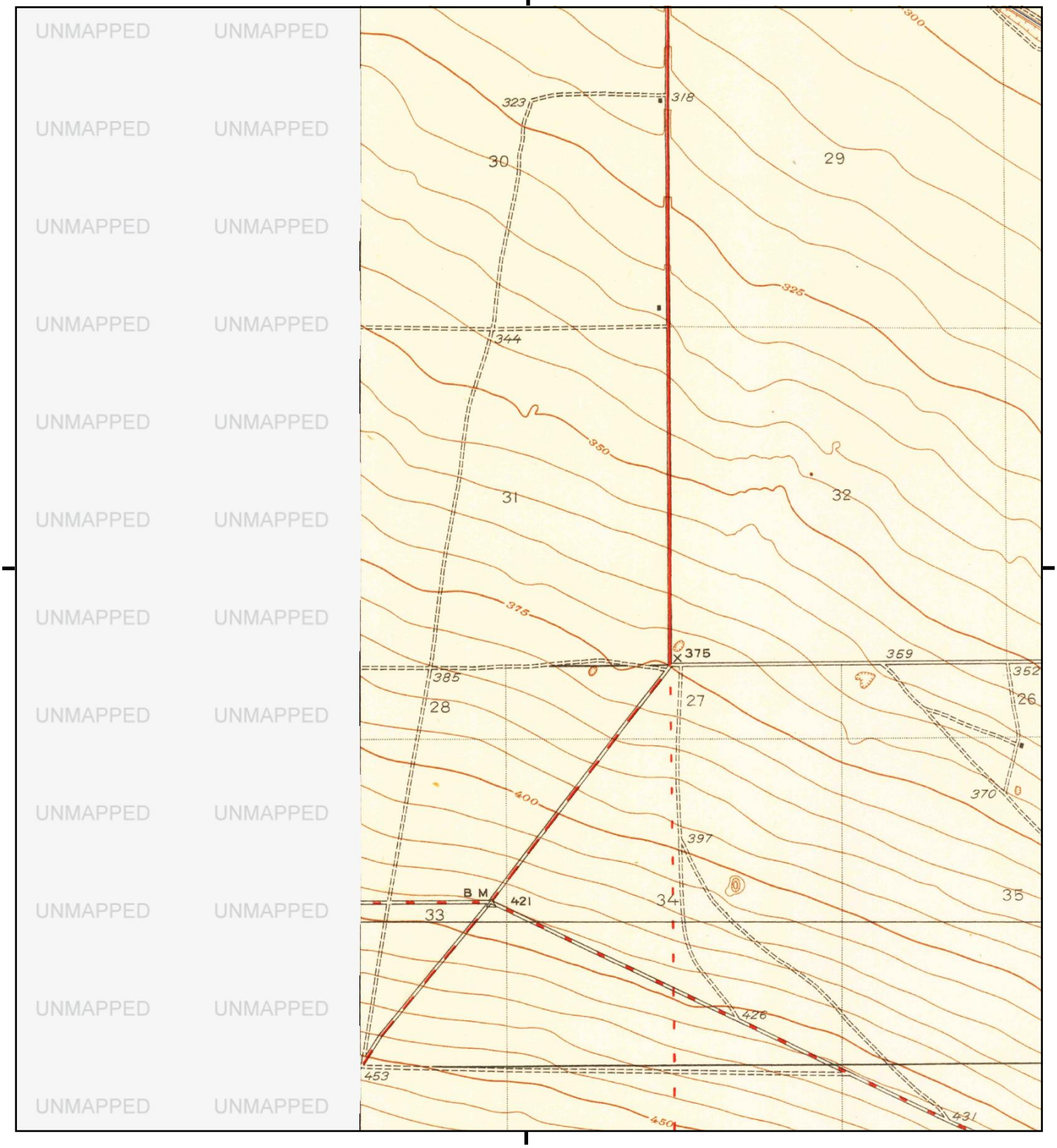
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Coal Oil Canyon, 1955, 7.5-minute
SW, Conner SW, 1955, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

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

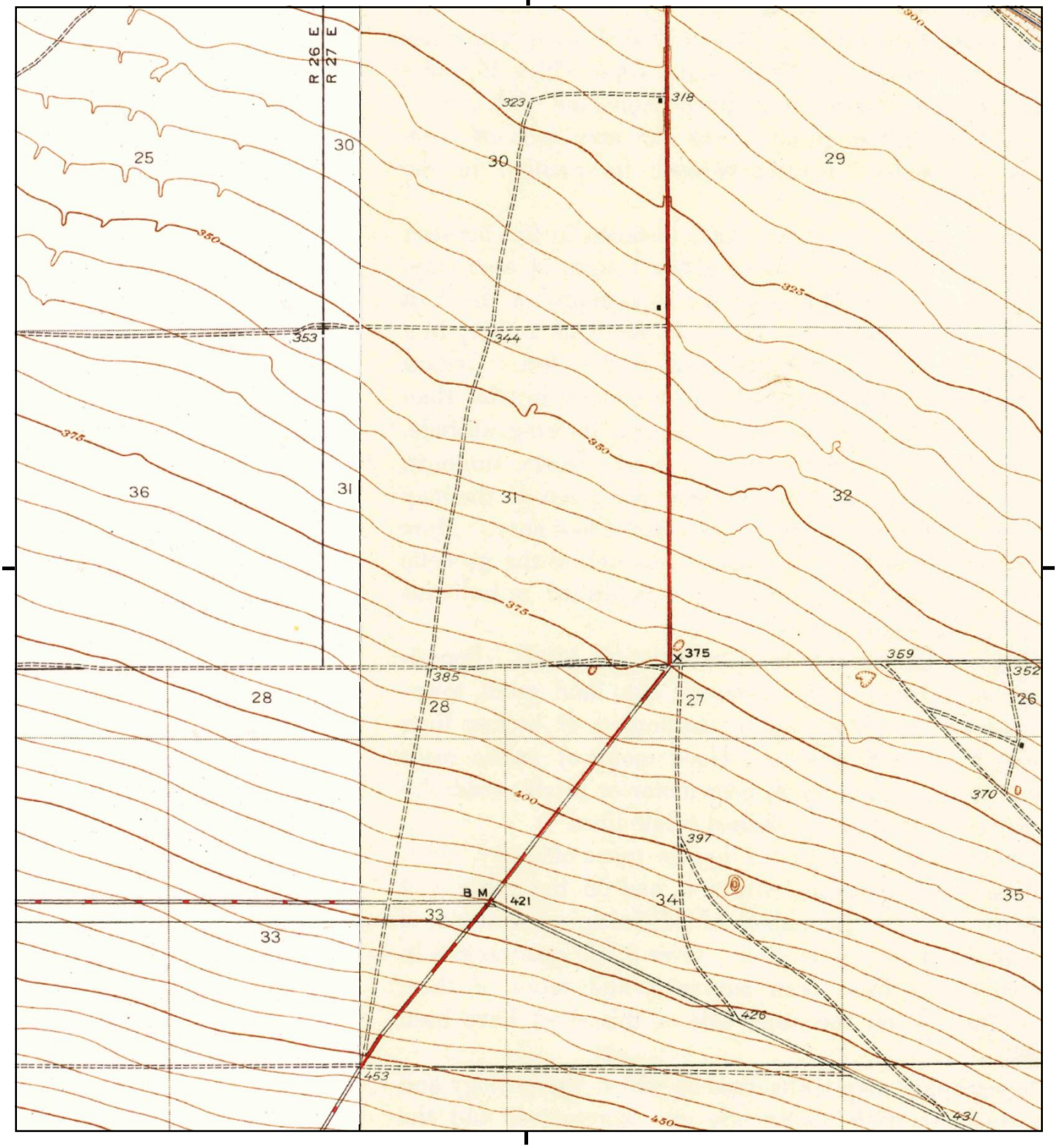
TP, Coal Oil Canyon, 1950, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N

Historical Topo Map

1933, 1934



This report includes information from the following map sheet(s).

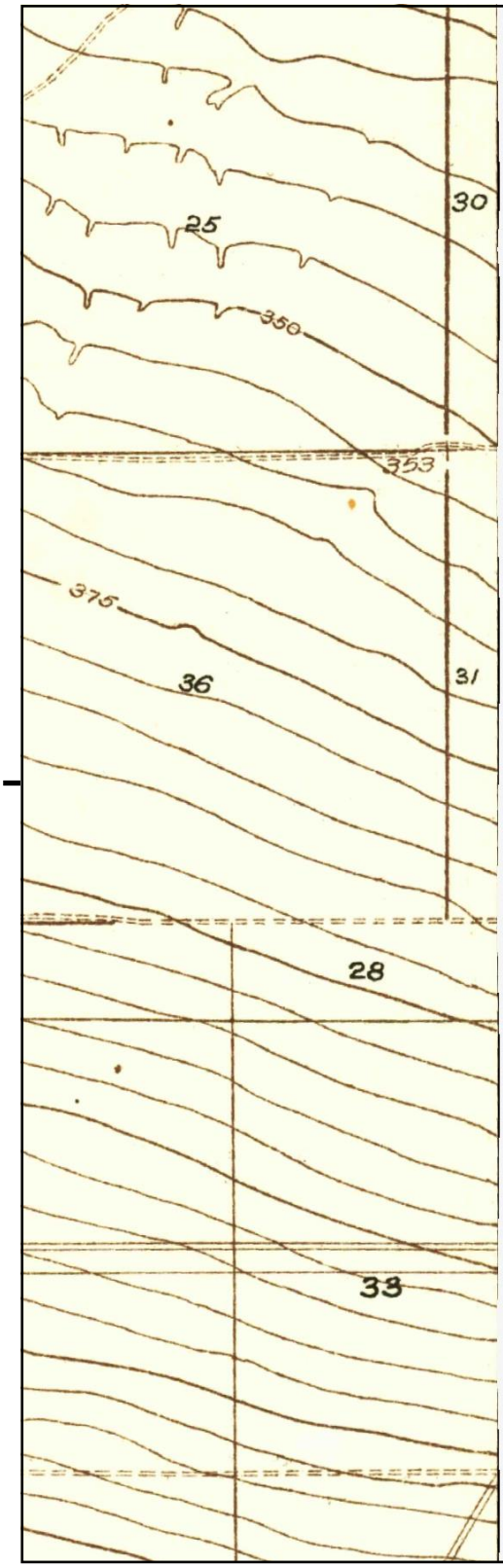
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Coal Oil Canyon, 1934, 7.5-minute
SW, Hayes Ranch, 1933, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N



UNMAPPED

This report includes information from the following map sheet(s).

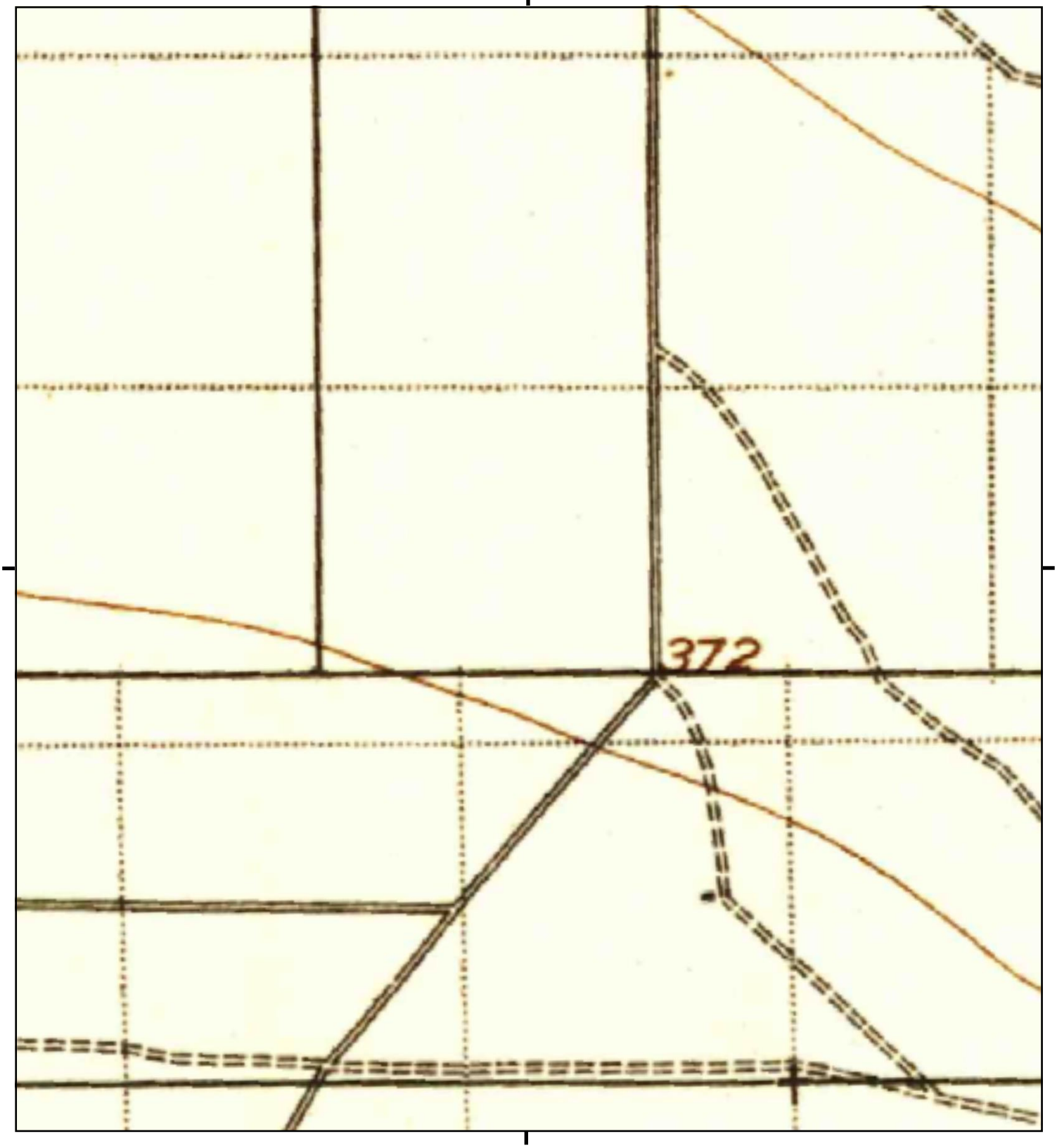
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SW, Hayes Ranch, 1931, 7.5-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

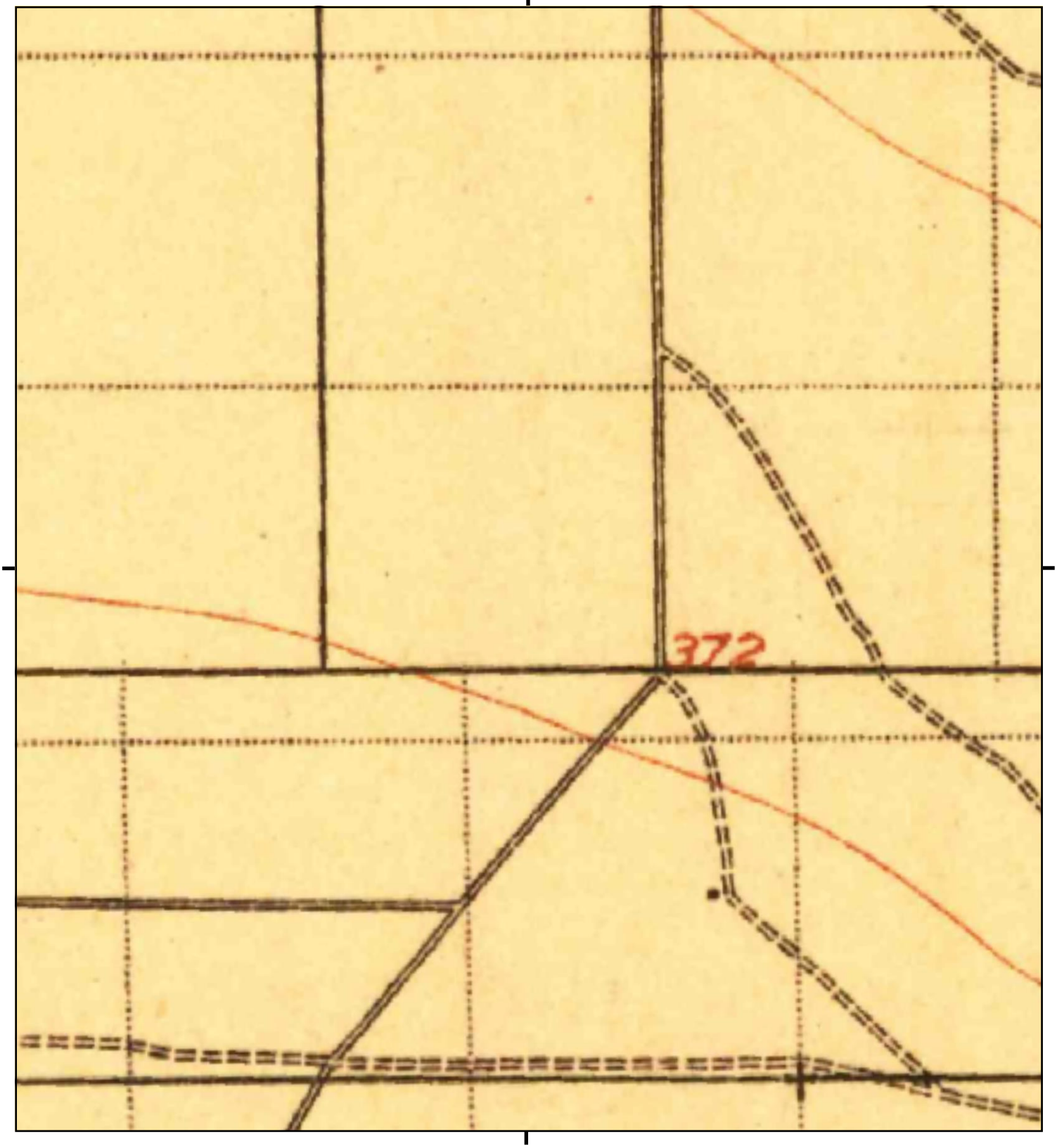
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buena Vista Lake, 1912, 30-minute

SITE NAME: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

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: Jasmine Solar Project
ADDRESS: Jasmine Solar Project
Bakersfield, CA 93311
CLIENT: Rincon

N

Jasmine Solar Project

Jasmine Solar Project

Bakersfield, CA 93311

Inquiry Number: 6246888.5

November 05, 2020

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

11/05/20

Site Name:

Jasmine Solar Project
Jasmine Solar Project
Bakersfield, CA 93311
EDR Inquiry # 6246888.5

Client Name:

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Lauren Roenicke

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Search Results:

Year	*Scale*	*Details*	*Source*
2012	1"=1000'	Flight Year: 2012	USDA/NAIP
2009	1"=1000'	Flight Year: 2009	USDA/NAIP
2005	1"=1000'	Flight Year: 2005	USDA/NAIP
1994	1"=1000'	Acquisition Date: January 01, 1994	USGS/DOQQ
1989	1"=1000'	Flight Date: January 01, 1989	USDA
1973	1"=1000'	Flight Date: January 01, 1973	USDA
1967	1"=1000'	Flight Date: January 01, 1967	USDA
1956	1"=1000'	Flight Date: January 01, 1956	USDA
1946	1"=1000'	Flight Date: January 01, 1946	USDA
1937	1"=1000'	Flight Date: January 01, 1937	USDA

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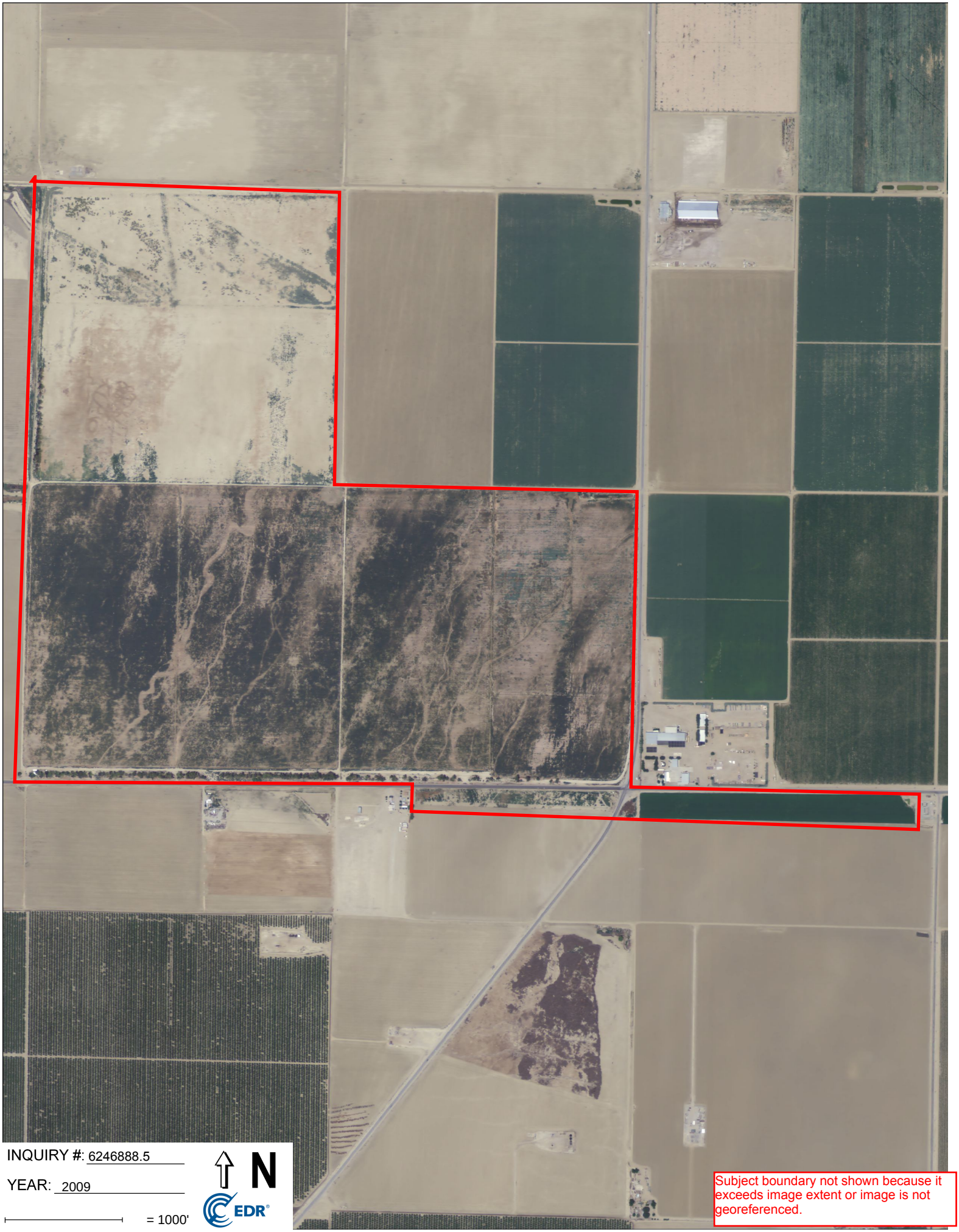
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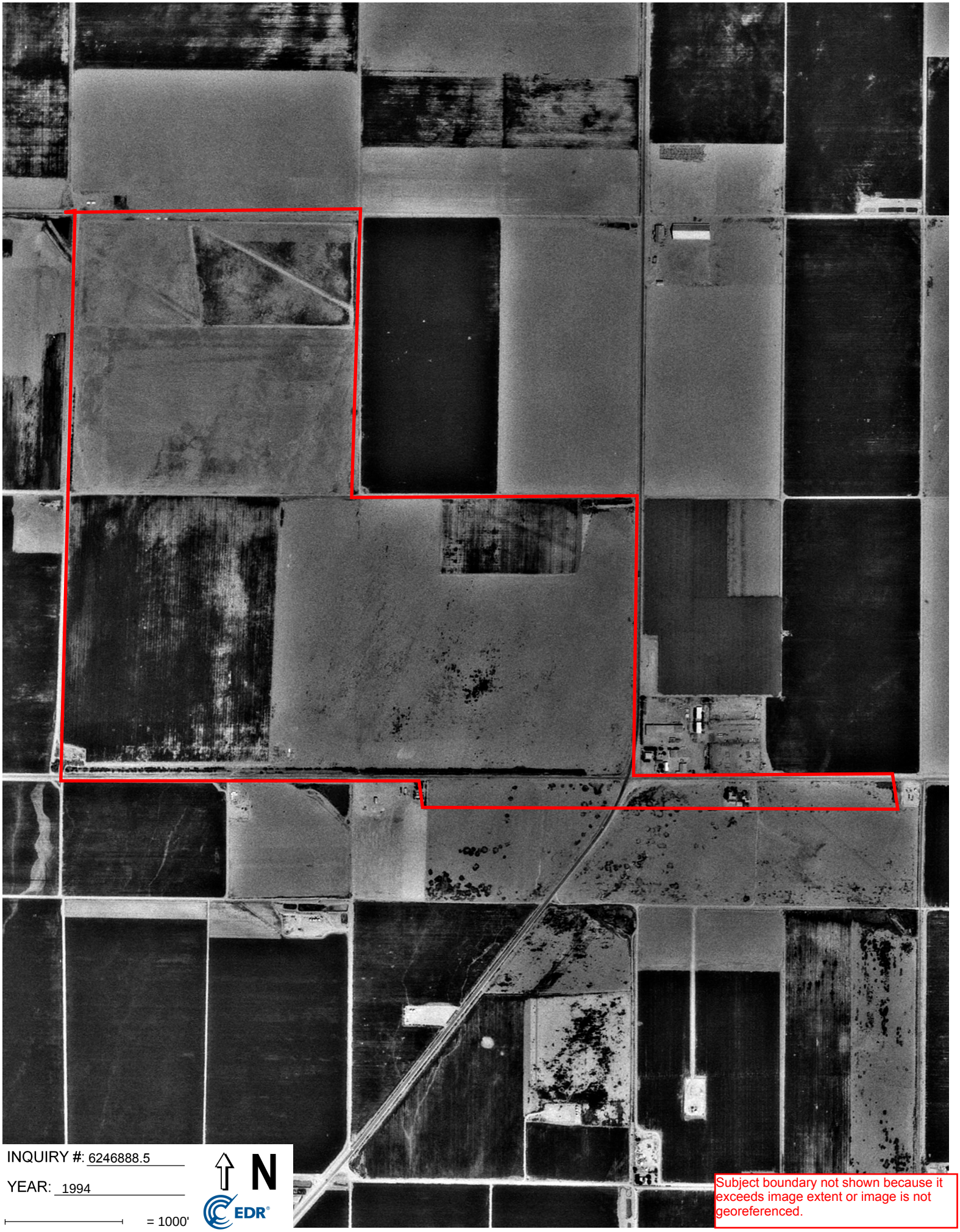
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INQUIRY #: 6246888.5
YEAR: 2012
= 1000'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 6246888.5
YEAR: 2009
= 1000'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


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YEAR: 2005
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Subject boundary not shown because it exceeds image extent or image is not georeferenced.


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YEAR: 1994
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Subject boundary not shown because it exceeds image extent or image is not georeferenced.


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YEAR: 1973
= 1000'
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EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6246888.5

YEAR: 1967

= 1000'

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EDR



INQUIRY #: 6246888.5

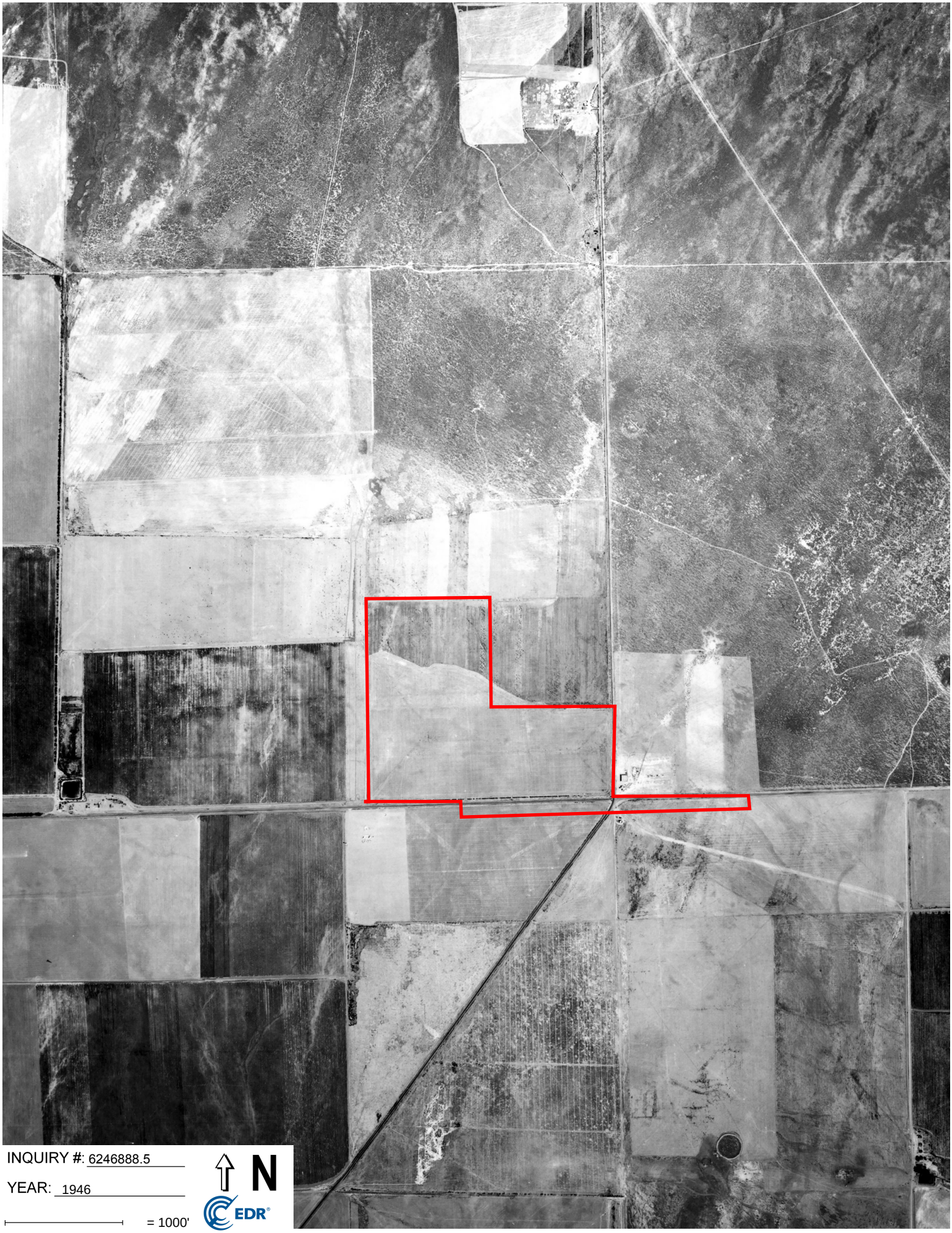
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EDR

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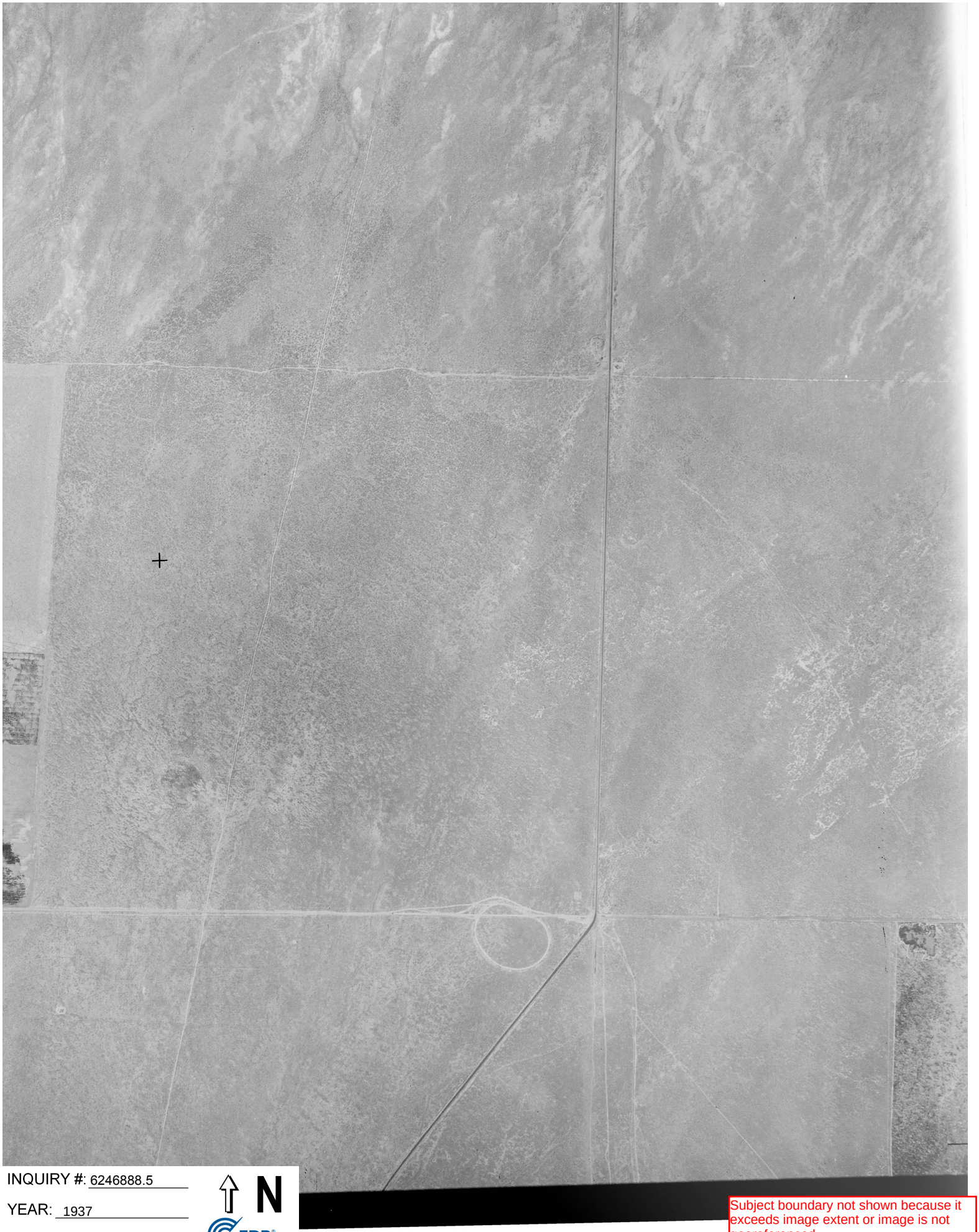
INQUIRY #: 6246888.5

YEAR: 1946

= 1000'

N

EDR



INQUIRY #: 6246888.5

YEAR: 1937

= 1000'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

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Appendix J-2

Phase II Environmental Site Assessment

Rincon Consultants, Inc.

180 North Ashwood Avenue
Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

April 27, 2022
Project No.: 20-09824

Attn: Ms. Christine Lan
Project Development Manager
Idemitsu Renewables
50 California Street, #820
San Francisco, California 94111
Via email: Christine.lan.0400@idemitsurenewables.com

Subject: **Phase II Environmental Site Assessment**
Jasmine Solar Project, Kern County, California

Dear Ms. Lan:

Rincon Consultants, Inc. (Rincon) is pleased to submit this letter report summarizing the results of a Phase II Environmental Site Assessment (ESA) conducted for the Jasmine Solar Project in Kern County, California (site – Figure 1). The Phase II ESA was conducted for SF Jasmine, LLC and consisted of a soil matrix assessment. A Phase I ESA was prepared by Rincon for the site, dated April 27, 2022. The Phase I ESA identified one recognized environmental condition at the site, associated with the onsite agricultural ponds. Therefore, Rincon recommended a soil assessment be conducted.

Scope of Work

The Phase II ESA, conducted on April 13, 2022, included the following scope of work:

- Preparation of a site-specific Health and Safety Plan
- Because water was observed, a total of four soil borings (RB-A-N, RB-A-E, RB-A-S, RB-A-W) were advanced directly above the water line in the agricultural pond located in the central portion of the site (agricultural pond #1). Soil samples were collected from 0.0-0.5 feet below ground surface (bgs) in the four boring locations.
- Because no water was observed, a total of two soil borings (RB-3 and RB-4) were advanced in the bottom of the agricultural pond located in the southeastern portion of the site (agricultural pond #2). Soil samples were collected from 0.5 and 2 feet bgs in each of the two borings, for a total of four soil samples.
- The soil samples were collected using a hand auger and were placed into laboratory-supplied glass jars, capped, labeled, and stored on ice before delivery to a state-accredited analytical laboratory under chain-of-custody documentation. Sampling equipment was properly decontaminated during sampling.
- The soil samples were analyzed for the following constituents:
  - Organochlorine pesticides (OCPs) by United States Environmental Protection Agency (US EPA) Method 8081A
  - Arsenic and selenium by US EPA Method 6010B

Soil Matrix Analytical Results

Soil matrix analytical results were compared to San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (SFB RWQCB ESLs) for soil matrix for a construction worker exposure scenario (SFB RWQCB 2019)[1]. Arsenic concentrations were also compared to the upper bound arsenic concentration (DTSC 2020)[2]. The laboratory analytical report for soil matrix samples is included in Attachment 1. Soil analytical laboratory data is summarized in Table 1.

OCPs

Dichlorodiphenyldichloroethylene (DDE) was detected in three of the soil samples analyzed. However, the detected concentrations are below the construction worker ESL for DDE.

Dichlorodiphenyltrichloroethane (DDT) was detected in one of the soil samples analyzed. However, the detected concentration is below the construction worker ESL for DDT.

No other OCPs were detected above laboratory reporting limits. Rincon confirmed that the reporting limits are below residential screening levels.

Arsenic

Arsenic was detected in all soil samples analyzed, ranging from 6.2 milligrams per kilogram (mg/kg) to 13 mg/kg. All of the concentrations detected exceed the construction worker ESL for arsenic of 2.0 mg/kg. Concentrations of arsenic in two of the soil samples (RB-A-N and RB-A-W, both detected at 13 mg/kg) collected from agricultural pond #1 also exceed the upper bound arsenic concentration of 12 mg/kg (DTSC 2020) (Table 1).

Selenium

Selenium was detected in five of the soil samples analyzed, ranging from 0.99 mg/kg to 2.0 mg/kg. All of the concentrations detected are below the construction worker ESL for selenium of 1,700 mg/kg.

Conclusions and Recommendations

Because concentrations of all OCPs and selenium were below their respective residential and construction worker ESLs, no additional assessment is recommended pertaining to those constituents.

The arsenic concentrations in two soil samples collected from agricultural pond #1 slightly exceeded the typical background concentration range for arsenic in California soil; however, it is possible that arsenic detections are a result of geologic conditions at the site and are not representative of anthropogenic impacts. Furthermore, it is our understanding that agricultural pond #1 will be avoided during construction activities and will not be disturbed. Therefore, no additional assessment pertaining to arsenic is recommended at agricultural pond #1.

Additionally, because arsenic concentrations were below the DTSC upper bound arsenic concentration, and selenium and OCPs were not detected above their respective applicable screening levels in the soil

[1] San Francisco Bay Regional Water Quality Control Board. 2019. Environmental Screening Levels (ESLs). July 2019.
[2]

samples collected from agricultural pond #2, no further assessment is recommended for agricultural pond #2.

Limitations

This report has been prepared for and is intended for the exclusive use of SF Jasmine, LLC. The contents of this report should not be relied upon by any other party without the written consent of Rincon. Our conclusions regarding the site are based on observations of existing site conditions and the results of the subsurface sampling program described in this report. The results of this evaluation are qualified by the fact that only limited sampling and analytical testing was conducted during this assessment.

This scope was not intended to completely establish the quantities and distribution of contaminants present at the site. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Furthermore, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other events. Conclusions regarding the condition of the site do not represent a warranty that all areas within the site are similar to those sampled.

We appreciate the opportunity to support you on this project. Please contact us with any questions or concerns.

Sincerely,
Rincon Consultants, Inc.

Lauren Kodama Roenicke
Project Manager, Due Diligence

Ryan Thacher, PhD, PE
Director, Site Assessment and Remediation

Lisa Bestard
Senior Environmental Scientist

Figures

Figure 1 Vicinity
Figure 2 Boring Locations

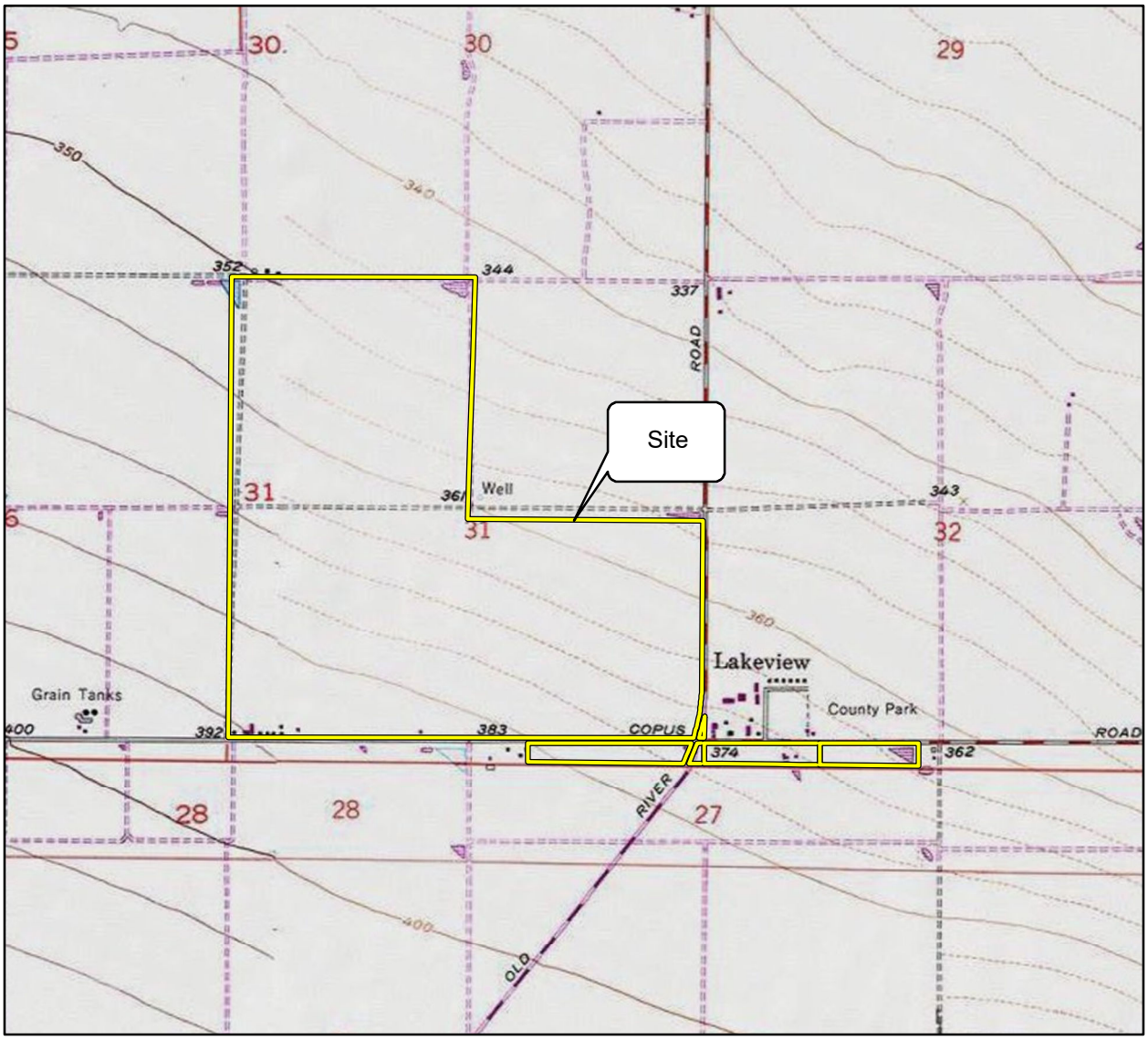
Tables

Table 1 Soil Matrix Analytical Results – OCPs, Arsenic, and Selenium

Attachments

Attachment 1 Laboratory Analytical Report

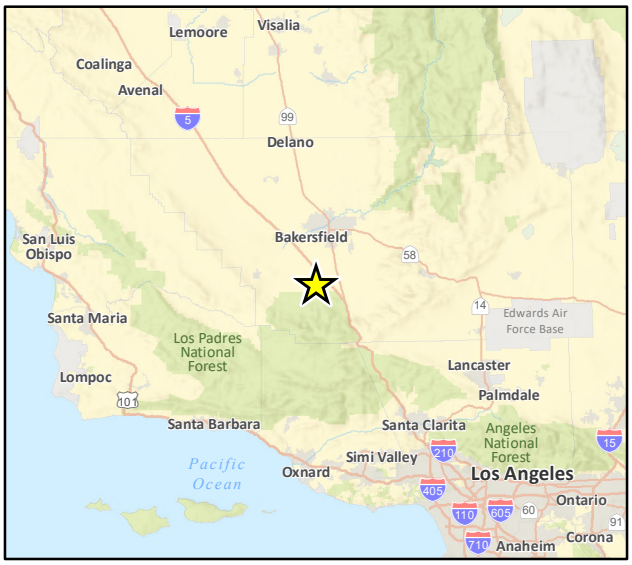
Figures



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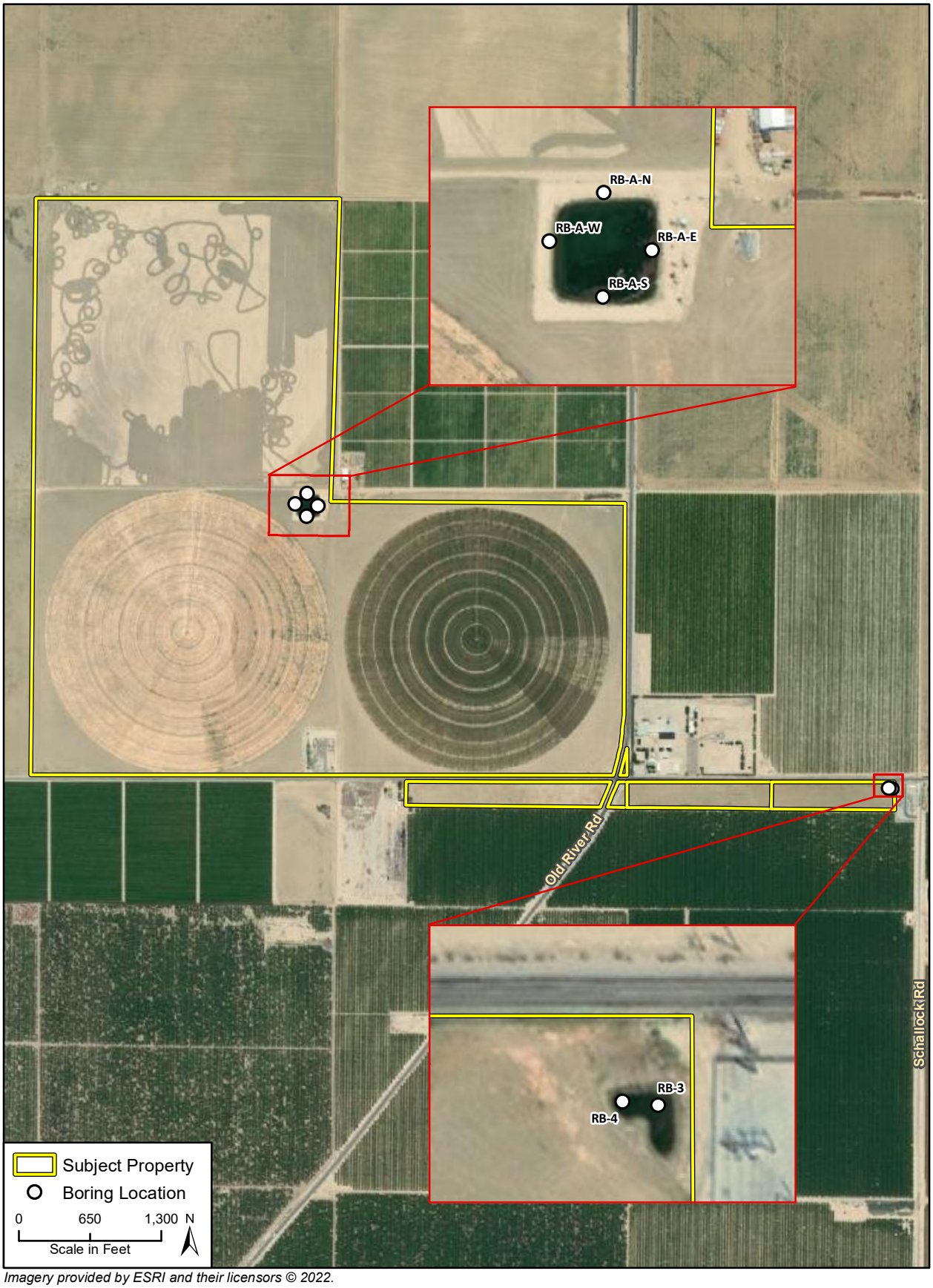
0 1,000 2,000
Scale in Feet

N



Vicinity

Figure 1



Imagery provided by ESRI and their licensors © 2022.

Boring Locations

Figure 2

Table

Table 1: Soil Matrix Analytical Results - OCPs, Arsenic, and Selenium

Sample ID	Depth (feet bgs)	DDE	DDT	Other OCPs	Arsenic	Selenium
		Concentration (mg/kg)				
Agricultural Pond #1						
RB-A-N	0.0-0.5	<0.000095	<0.000040	<Various	**13**	<0.98
RB-A-E		<0.000095	<0.000040	<Various	**10**	<0.98
RB-A-S		**0.059 A10**	**0.0075**	<Various	**7.7**	<0.98
RB-A-W		<0.000095	<0.000040	<Various	**13**	**0.99 J**
Agricultural Pond #2						
RB-3	0.5	**0.029 A10**	<0.00040	<Various	**6.2**	**1.1**
	2.5	<0.000095	<0.000040	<Various	**8.0**	**2.0**
RB-4	0.5	**0.011 A10**	<0.000040	<Various	**8.7**	**1.9**
	2.5	<0.000095	<0.000040	<Various	**8.3**	**1.2**
Construction Worker ESL		*57*	*57*	*<Various*	*2*	*1,700*
Background Concentration		*NE*	*NE*	*NE*	*0.6-11*	*0.015 - 0.430*
DTSC Upper Bound Arsenic Concentration		*NE*	*NE*	*NE*	*12*	*NE*

Definitions

bold	Analyte detected above practical quantitation limit
	Concentration detected above applicable screening level
<	Not detected above the method detection limit
A10	Detection and quantitation limits were raised due to matrix interference
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
bgs	below ground surface
J	estimated value
mg/kg	milligrams per kilogram
NE	not established
OCPs	organochlorine pesticides
DTSC	Department of Toxic Substances Control

Screening Levels

ESLs - Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, July 2019, Revision 2,
Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Cancer Hazard (lower value selected) for:
Residential ESLs - Residential: Shallow Soil Exposure

Background Concentration - Kearney, Background Concentrations of Trace and Major Elements in California Soils, University of California, 1996

DTSC Upper Bound Arsenic Screening Concentration, 2020

Attachment 1

Laboratory Analytical Report

Date of Report: 04/20/2022

Scott English

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Client Project:	20-09824 Jasmine Solar Project
BCL Project:	Soil Samples
BCL Work Order:	2208630
Invoice ID:	B446950

Enclosed are the results of analyses for samples received by the laboratory on 4/13/2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Eli Velazquez
Client Service Rep

Stuart Buttram
Operations Manager

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Table of Contents

Sample Information

Chain of Custody and Cooler Receipt form 3
Laboratory / Client Sample Cross Reference 5

Sample Results

2208630-01 - RB-A-N

Organochlorine Pesticides (EPA Method 8081A) 7
Total Concentrations (TTLC) 8

2208630-02 - RB-A-E

Organochlorine Pesticides (EPA Method 8081A) 9
Total Concentrations (TTLC) 10

2208630-03 - RB-A-S

Organochlorine Pesticides (EPA Method 8081A) 11
Total Concentrations (TTLC) 12

2208630-04 - RB-A-W

Organochlorine Pesticides (EPA Method 8081A) 13
Total Concentrations (TTLC) 14

2208630-05 - RB-3-0.5

Organochlorine Pesticides (EPA Method 8081A) 15
Total Concentrations (TTLC) 16

2208630-06 - RB-3-2.5

Organochlorine Pesticides (EPA Method 8081A) 17
Total Concentrations (TTLC) 18

2208630-07 - RB-4-0.5

Organochlorine Pesticides (EPA Method 8081A) 19
Total Concentrations (TTLC) 20

2208630-08 - RB-4-2.5

Organochlorine Pesticides (EPA Method 8081A) 21
Total Concentrations (TTLC) 22

Quality Control Reports

Organochlorine Pesticides (EPA Method 8081A)

Method Blank Analysis 23
Laboratory Control Sample 24
Precision and Accuracy 25

Total Concentrations (TTLC)

Method Blank Analysis 26
Laboratory Control Sample 27
Precision and Accuracy 28

Notes

Notes and Definitions 29

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Chain of Custody and Cooler Receipt Form for 2208630 Page 1 of 2

BC LABORATORIES, INC.
4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

RUSH! Chain of Custody Form

Page 1 of 1

Report To
Client: Rincon Consultants
Attn: Lauren Rodnicke
Street Address: 180 N. Ashwood Ave.
City, State, Zip: Ventura, CA 93003
Phone: Fax:
Email: lrodnicke@rinconconsultants.com
Work Order #: 22-08630

Project #: 20-09824
Project Name: JASMINE SOLAR PROJECT
Sampler(s): LANDON L.

Comments:

Result Request "Surcharge
☐ STD (10 Days) ☒ 5 Day** ☐ 4 Day**
☐ 3 Day** ☐ 2 Day** ☐ 1 Day**

Sample Matrix: Soil, Sludge, Drinking Water, Ground Water, Waste Water, Other

Analysis Requested: OCPs by 8081A; Arsenic by 6010B; Barium by 6010B

Sample #	Description	Date Sampled	Time Sampled	Notes
-1	RB-ANN	4/13/22	1050	
-2	RB-A-E		1100	
-3	RB-A-S		1030	
-4	RB-A-W		1040	
-5	RB-B-3-0.5		0900	
-6	RB-B-2.5		0915	
-7	RB-4-0.5		0925	
-8	RB-4-2.5		0955	

CHK BY DISTRIBUTION
SUB OUT ☐

Billing: ☒ Same as above
Client:
Address:
City: State Zip
Attn:
P.O. #:

*Send Copy to State of CA? (EDT) ☐ Yes ☐ No
System # (Needed for EDT)

EDF Required Geotracker ☐ Yes ☐ No
Global ID

	Relinquished By	Date	Time	Received By	Date	Time
1.	Landon Lydan	4/13/22	1258	1.		
2.				2.		
3.				3.		

*For Drinking Water, mark "EDT - yes or no." If marked no, BCL will not upload at a future date.

Chain of Custody and Cooler Receipt Form for 2208630 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-086308

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☒ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☒ W / S

Refrigerant: Ice ☐ Blue Ice ☒ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: Clear Glass Thermometer ID: 337 WMD

Temperature: (A) 9.7 °C / (C) 9.6 °C 04/13/22

Date/Time 4-13-22

Analyst Init SMH 12:58

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A		
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:_____

Sample Numbering Completed By: Pilc Date/Time: 4/13/22 1002

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 28]

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Pace Analytical
ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura	**Reported:** 04/20/2022 16:23
180 North Ashwood Avenue	Project: Soil Samples
Ventura, CA 93003	Project Number: 20-09824 Jasmine Solar Project
	Project Manager: Scott English

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2208630-01	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 10:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-A-N	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-02	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-A-E	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-03	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-A-S	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-04	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-A-W	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-05	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-06	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 09:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-3-2.5	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil
2208630-07	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 09:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2208630-08	**COC Number:**	---	**Receive Date:**	04/13/2022 12:58
	Project Number:	---	**Sampling Date:**	04/13/2022 09:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	RB-4-2.5	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-01 | **Client Sample Name:** RB-A-N, 4/13/2022 10:50:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	ND	mg/kg	0.00050	0.000095	EPA-8081A	1.0		1
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	20.8	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	40.1	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 11:06	RSM	GC-17	1.014	B137048	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-01 | **Client Sample Name:** RB-A-N, 4/13/2022 10:50:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**13**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:15	JCC	PE-OP3	0.926	B137255	EPA 3050B

DCN = Data Continuation Number

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-02 | **Client Sample Name:** RB-A-E, 4/13/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	ND	mg/kg	0.00050	0.000095	EPA-8081A	1.0		1
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	18.2	%	20 - 130 (LCL - UCL)		EPA-8081A		S09	1
Decachlorobiphenyl (Surrogate)	27.6	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 11:23	RSM	GC-17	0.987	B137048	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-02 | **Client Sample Name:** RB-A-E, 4/13/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**10**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:17	JCC	PE-OP3	0.971	B137255	EPA 3050B

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-03 | **Client Sample Name:** RB-A-S, 4/13/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	**0.059**	**mg/kg**	**0.0050**	**0.00095**	**EPA-8081A**	1.0	**A10**	2
4,4'-DDT	**0.0075**	**mg/kg**	**0.00050**	**0.000040**	**EPA-8081A**	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	34.6	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	22.3	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 10:50	RSM	GC-17	1.017	B137048	EPA 3550B
2	EPA-8081A	04/14/22 09:30	04/18/22 20:33	RSM	GC-17	10.169	B137048	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-03 | **Client Sample Name:** RB-A-S, 4/13/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**7.7**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:19	JCC	PE-OP3	0.926	B137255	EPA 3050B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-04 | **Client Sample Name:** RB-A-W, 4/13/2022 10:40:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	ND	mg/kg	0.00050	0.000095	EPA-8081A	1.0		1
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	11.1	%	20 - 130 (LCL - UCL)		EPA-8081A		S09	1
Decachlorobiphenyl (Surrogate)	21.9	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 11:39	RSM	GC-17	1.017	B137048	EPA 3550B

DCN = Data Continuation Number

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180 North Ashwood Avenue
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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-04 | **Client Sample Name:** RB-A-W, 4/13/2022 10:40:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**13**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	**0.99**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100	**J**	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:21	JCC	PE-OP3	0.962	B137255	EPA 3050B

DCN = Data Continuation Number

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-05 | **Client Sample Name:** RB-3-0.5, 4/13/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.0050	0.00018	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.0050	0.00038	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.0050	0.00048	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.0050	0.00037	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.0050	0.00018	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	0.50	0.010	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.0050	0.00064	EPA-8081A	1.0	A10	1
4,4'-DDE	**0.029**	**mg/kg**	**0.0050**	**0.00095**	**EPA-8081A**	1.0	**A10**	1
4,4'-DDT	ND	mg/kg	0.0050	0.00040	EPA-8081A	1.0	A10	1
Dieldrin	ND	mg/kg	0.0050	0.00036	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.0050	0.00020	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.0050	0.00034	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.0050	0.00026	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.0050	0.00065	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.0050	0.00018	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.0050	0.00086	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.0050	0.00017	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.0050	0.00094	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	0.50	0.014	EPA-8081A	5	A10	1
TCMX (Surrogate)	47.1	%	20 - 130 (LCL - UCL)		EPA-8081A		A10	1
Decachlorobiphenyl (Surrogate)	37.1	%	40 - 130 (LCL - UCL)		EPA-8081A		A10,S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 11:56	RSM	GC-17	10.169	B137048	EPA 3550B

DCN = Data Continuation Number

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-05 | **Client Sample Name:** RB-3-0.5, 4/13/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**6.2**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	**1.1**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:23	JCC	PE-OP3	0.980	B137255	EPA 3050B

DCN = Data Continuation Number

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-06 | **Client Sample Name:** RB-3-2.5, 4/13/2022 9:15:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	ND	mg/kg	0.00050	0.000095	EPA-8081A	1.0		1
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	13.9	%	20 - 130 (LCL - UCL)		EPA-8081A		S09	1
Decachlorobiphenyl (Surrogate)	42.2	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 12:12	RSM	GC-17	1	B137048	EPA 3550B

DCN = Data Continuation Number

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180 North Ashwood Avenue
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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-06 | **Client Sample Name:** RB-3-2.5, 4/13/2022 9:15:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**8.0**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	**2.0**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 14:25	JCC	PE-OP3	0.980	B137255	EPA 3050B

DCN = Data Continuation Number

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-07 | **Client Sample Name:** RB-4-0.5, 4/13/2022 9:25:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	**0.011**	**mg/kg**	**0.0010**	**0.00019**	**EPA-8081A**	1.0	**A10**	2
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	19.9	%	20 - 130 (LCL - UCL)		EPA-8081A		S09	1
Decachlorobiphenyl (Surrogate)	19.5	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 12:29	RSM	GC-17	1.007	B137048	EPA 3550B
2	EPA-8081A	04/14/22 09:30	04/18/22 20:50	RSM	GC-17	2.013	B137048	EPA 3550B

DCN = Data Continuation Number

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-07 | **Client Sample Name:** RB-4-0.5, 4/13/2022 9:25:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**8.7**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	**1.9**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 15:54	JCC	PE-OP3	0.943	B137255	EPA 3050B

DCN = Data Continuation Number

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2208630-08 | **Client Sample Name:** RB-4-2.5, 4/13/2022 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	ND	mg/kg	0.00050	0.000064	EPA-8081A	1.0		1
4,4'-DDE	ND	mg/kg	0.00050	0.000095	EPA-8081A	1.0		1
4,4'-DDT	ND	mg/kg	0.00050	0.000040	EPA-8081A	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	ND	mg/kg	0.050	0.0014	EPA-8081A	5		1
TCMX (Surrogate)	19.8	%	20 - 130 (LCL - UCL)		EPA-8081A		S09	1
Decachlorobiphenyl (Surrogate)	42.7	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	04/14/22 09:30	04/16/22 12:45	RSM	GC-17	0.997	B137048	EPA 3550B

DCN = Data Continuation Number

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2208630-08 | **Client Sample Name:** RB-4-2.5, 4/13/2022 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Arsenic	**8.3**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Selenium	**1.2**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	04/18/22 10:30	04/19/22 15:56	JCC	PE-OP3	0.909	B137255	EPA 3050B

DCN = Data Continuation Number

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Pace Analytical
ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B137048						
Aldrin	B137048-BLK1	ND	mg/kg	0.00050	0.000018	
alpha-BHC	B137048-BLK1	ND	mg/kg	0.00050	0.000038	
beta-BHC	B137048-BLK1	ND	mg/kg	0.00050	0.000048	
delta-BHC	B137048-BLK1	ND	mg/kg	0.00050	0.000037	
gamma-BHC (Lindane)	B137048-BLK1	ND	mg/kg	0.00050	0.000018	
Chlordane (Technical)	B137048-BLK1	ND	mg/kg	0.050	0.0010	
4,4'-DDD	B137048-BLK1	ND	mg/kg	0.00050	0.000064	
4,4'-DDE	B137048-BLK1	ND	mg/kg	0.00050	0.000095	
4,4'-DDT	B137048-BLK1	ND	mg/kg	0.00050	0.000040	
Dieldrin	B137048-BLK1	ND	mg/kg	0.00050	0.000036	
Endosulfan I	B137048-BLK1	ND	mg/kg	0.00050	0.000020	
Endosulfan II	B137048-BLK1	ND	mg/kg	0.00050	0.000034	
Endosulfan sulfate	B137048-BLK1	ND	mg/kg	0.00050	0.000026	
Endrin	B137048-BLK1	ND	mg/kg	0.00050	0.000065	
Endrin aldehyde	B137048-BLK1	ND	mg/kg	0.00050	0.000018	
Heptachlor	B137048-BLK1	ND	mg/kg	0.00050	0.000086	
Heptachlor epoxide	B137048-BLK1	ND	mg/kg	0.00050	0.000017	
Methoxychlor	B137048-BLK1	ND	mg/kg	0.00050	0.000094	
Toxaphene	B137048-BLK1	ND	mg/kg	0.050	0.0014	
TCMX (Surrogate)	**B137048-BLK1**	**90.2**	%	**20 - 130 (LCL - UCL)**		
Decachlorobiphenyl (Surrogate)	**B137048-BLK1**	**88.9**	%	**40 - 130 (LCL - UCL)**		

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B137048										
Aldrin	B137048-BS1	LCS	0.0046347	0.0050505	mg/kg	91.8		70 - 130		
gamma-BHC (Lindane)	B137048-BS1	LCS	0.0046764	0.0050505	mg/kg	92.6		60 - 140		
4,4'-DDT	B137048-BS1	LCS	0.0043222	0.0050505	mg/kg	85.6		60 - 140		
Dieldrin	B137048-BS1	LCS	0.0045451	0.0050505	mg/kg	90.0		70 - 130		
Endrin	B137048-BS1	LCS	0.0041771	0.0050505	mg/kg	82.7		60 - 140		
Heptachlor	B137048-BS1	LCS	0.0046960	0.0050505	mg/kg	93.0		60 - 140		
TCMX (Surrogate)	B137048-BS1	LCS	0.0098077	0.010101	mg/kg	97.1		20 - 130		
Decachlorobiphenyl (Surrogate)	B137048-BS1	LCS	0.019431	0.020202	mg/kg	96.2		40 - 130		

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B137048	Used client sample: Y - Description: RB-A-S, 04/13/2022 10:30										
Aldrin	MS	2208630-03	ND	0.0026927	0.0049505	mg/kg		54.4		50 - 140	
	MSD	2208630-03	ND	0.0027214	0.0049342	mg/kg	1.1	55.2	30	50 - 140	
gamma-BHC (Lindane)	MS	2208630-03	ND	0.0027644	0.0049505	mg/kg		55.8		50 - 140	
	MSD	2208630-03	ND	0.0026914	0.0049342	mg/kg	2.7	54.5	30	50 - 140	
4,4'-DDT	MS	**2208630-03**	**0.0074712**	**0.025696**	**0.0049505**	**mg/kg**		**368**		**50 - 140**	**Q03**
	MSD	**2208630-03**	**0.0074712**	**0.026145**	**0.0049342**	**mg/kg**	**1.7**	**378**	**30**	**50 - 140**	**Q03**
Dieldrin	MS	2208630-03	ND	0.0036139	0.0049505	mg/kg		73.0		40 - 140	
	MSD	2208630-03	ND	0.0035780	0.0049342	mg/kg	1.0	72.5	30	40 - 140	
Endrin	MS	**2208630-03**	**ND**	**0.0097970**	**0.0049505**	**mg/kg**		**198**		**50 - 150**	**Q03**
	MSD	**2208630-03**	**ND**	**0.0097079**	**0.0049342**	**mg/kg**	**0.9**	**197**	**30**	**50 - 150**	**Q03**
Heptachlor	MS	**2208630-03**	**ND**	**0.0028865**	**0.0049505**	**mg/kg**		**58.3**		**60 - 140**	**Q03**
	MSD	**2208630-03**	**ND**	**0.0027934**	**0.0049342**	**mg/kg**	**3.3**	**56.6**	**30**	**60 - 140**	**Q03**
TCMX (Surrogate)	MS	2208630-03	ND	0.0060304	0.0099010	mg/kg		60.9		20 - 130	
	MSD	2208630-03	ND	0.0060928	0.0098684	mg/kg	1.0	61.7		20 - 130	
Decachlorobiphenyl (Surrogate)	MS	2208630-03	ND	0.013051	0.019802	mg/kg		65.9		40 - 130	
	MSD	2208630-03	ND	0.012793	0.019737	mg/kg	2.0	64.8		40 - 130	

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B137255						
Arsenic	B137255-BLK1	ND	mg/kg	1.0	0.40	
Selenium	B137255-BLK1	ND	mg/kg	1.0	0.98	

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B137255										
Arsenic	B137255-BS1	LCS	16.865	20.000	mg/kg	84.3		75 - 125		
Selenium	B137255-BS1	LCS	17.276	20.000	mg/kg	86.4		75 - 125		

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Reported: 04/20/2022 16:23
Project: Soil Samples
Project Number: 20-09824 Jasmine Solar Project
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B137255	Used client sample: N										
Arsenic	DUP	2208635-41	1.7401	1.8552		mg/kg	6.4		20		
	MS	2208635-41	1.7401	19.504	20.000	mg/kg		88.8		75 - 125	
	MSD	2208635-41	1.7401	19.047	20.000	mg/kg	2.4	86.5	20	75 - 125	
Selenium	DUP	2208635-41	ND	ND		mg/kg			20		
	MS	2208635-41	ND	17.764	20.000	mg/kg		88.8		75 - 125	
	MSD	2208635-41	ND	19.790	20.000	mg/kg	10.8	99.0	20	75 - 125	

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Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A10	Detection and quantitation limits were raised due to matrix interference.
Q03	Matrix spike recovery(s) was(were) not within the control limits.
S09	The surrogate recovery for this compound was not within the control limits.

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