DRAFT INITIAL STUDY
AND MITIGATED NEGATIVE DECLARATION

FOR THE

BIDR, LLC

WESTSIDE TREND EXPLORATION WELL PROJECT

KERN COUNTY, CALIFORNIA

DRAFT

August 2025

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Mitigated Negative Declaration

Project Name:

Westside Trend Exploration Well

Lead Agency Name and Address:

Department of Conservation, California Geologic Energy Management Division

715 P Street MS 19-06, Sacramento, CA 95814

Attn: Westside Trend Exploration Well Project

Contact Person, Phone Number, and Email Address:

Christine Roybal, 916-268-2535, Christine.Roybal@conservation.ca.gov

Attn: Westside Trend Exploration Well Project

Project Proponent Name and Address:

Bidr, LLC

19100 7th Standard Road, McKittrick, CA, 93251

Project Description:

Bidr, LLC (Bidr) applied to the California Department of Conservation, Geologic Energy Management Division (CalGEM) for a permit to drill one new exploratory well 1,500 feet south of the McDonald Anticline Oil Field and approximately 1,500 feet east and 1,100 feet north of the Carneros Creek Oil Field in Kern County.

The Project includes the drilling of one exploratory well, the creation of a new well pad, and the installation of a temporary storage facility. The impacts of this project are addressed in this Initial Study/Mitigated Negative Declaration (IS/MND).

Project Location:

The Project is in unincorporated Kern County, California, approximately 43 miles west of Bakersfield. The well will be located in Section 29, Township 28 South, Range 20 East MDB&M on APN 085-170-09 (Lat: 35.465456628 Long: -119.836119926). The location is approximately 1,500 feet south of the McDonald Anticline Oil Field and approximately 1,500 feet east and 1,100 feet north of the Carneros Creek Oil Field (Figure 1). The intersection of Highway 33 and Seventh Standard Road is located approximately 8 miles east of the Project Area boundary. The Project well would be drilled on private land.

Findings:

It is hereby determined that based on the information contained in the attached Initial Study, the Project, with implementation of the mitigation measures listed therein, would not have a significant effect on the environment. Mitigation measures necessary to avoid the potentially significant impacts on the environment are included in the Initial Study, which is hereby incorporated and fully made part of this Mitigated Negative Declaration. Bidr has reviewed

and agreed to implement all mitigation measures in the Initial Study. A Mitigation Monitoring and Reporting Plan (MMRP) containing each mitigation measure in this IS/MND has been prepared for adoption by the Department of Conservation, as the lead agency, and all mitigation measures, implemented as required and as outlined in the MMRP, will be incorporated as Conditions of Approval in all permits for the Project to ensure that mitigation measures are implemented, as required.

Pursuant to Section 21082.1 of the California Environmental Quality Act, the Department of Conservation has independently reviewed and analyzed the IS/MND for the proposed Project and finds that this document reflects the independent judgment of the Department of Conservation. The Department of Conservation also confirms that the Project mitigation measures detailed in this document are feasible and will be implemented as stated in the IS/MND.

_____ _____

Signature Date

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SECTION 1 Introduction

Bidr, LLC (Bidr) has applied to the California Department of Conservation, Geologic Energy Management Division (CalGEM), for a permit to drill one new exploratory well 1,500 feet south of the McDonald Anticline Oil Field and approximately 1,500 feet east and 1,100 feet north of the Carneros Creek Oil Field in Kern County.

EnviroTech Consultants, Inc. prepared this Initial Study (IS) on behalf of and with critical review, input, and policy expertise of CalGEM pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code, §21000 et seq.) and the CEQA Guidelines.

1.1 Summary of the Proposed Project

Bidr has submitted a Notice of Intention (NOI) to drill one new exploratory well to CalGEM. The new well would be drilled on a single new well pad and connected via new flow lines to temporary infrastructure at the well pad site (proposed Project). The well would be drilled in accordance with Chapter 1, Division 3 of the Public Resources Code.

1.2 Objectives of the Project

The objective of the proposed Project is to locate reserves of recoverable oil and gas by drilling, completing, operating, and maintaining one (1) exploratory well adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields. The proposed exploratory well lies within the unincorporated area of Kern County. Drilling, completing, operating, and maintaining the single well in Kern County constitutes the proposed Project. CalGEM has determined that drilling, reworking, and abandoning wells are discretionary actions subject to the provisions of CEQA.

CalGEM's objective is to respond to Bidr's NOI to drill the exploratory well. As the CEQA lead agency for the Project, the Department of Conservation, acting through CalGEM, is analyzing the Project as a whole. The Project includes the drilling of one exploratory well, the creation of a new well pad, and the installation of a temporary storage facility. If recoverable oil and gas reserves are located, production and maintenance activities would occur, including the construction of permanent production facilities, which would require a separate land use permit and associated CEQA analysis. The timing for plugging and abandoning the well, as well as decommissioning the attendant production facilities, and restoring the well pad site, is dependent upon the viability of the proposed Project, and would also require a separate CalGEM permit and associated CEQA analysis.

1.3 Purpose of the Environmental Assessment

This IS was prepared to evaluate the potential environmental effects of the proposed Project and support CalGEM's decision-making regarding the NOI to drill the exploratory well. An additional environmental assessment will be required for the construction of any permanent production facilities or to plug and abandon the well.

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1.4 Other Agency Actions

CalGEM has permitting authority for this proposed Project on private land in Kern County. The proposed Project had initially been prepared to be submitted for a Kern County Permit pursuant to the Kern County Final Supplemental Recirculated Environmental Impact Report and the Revised Kern County Zoning Ordinance for Local Oil and Gas Permitting that was adopted by the Kern County Board of Supervisors on March 8, 2021. However, following a decision by the Court of Appeal of the State of California Fifth Appellate District, permitting activity was suspended on January 26, 2023.

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SECTION 2 Project Description

Bidr has applied for one permit to drill and complete an exploratory well adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields. This section provides a detailed description of the proposed Project.

2.1 Project Location

The Project Area is located within unincorporated Kern County, California, approximately 43 miles west of Bakersfield. The well will be located in Section 29, Township 28 South, Range 20 East MDB&M on APN 085-170-09 (Lat: 35.465456628 Long: -119.836119926). The location is approximately 1,500 feet south of the McDonald Anticline Oil Field and approximately 1,500 feet east and 1,100 feet north of the Carneros Creek Oil Field (Figure 1). The intersection of Highway 33 and Seventh Standard Road is located approximately 8 miles east of the Project Area boundary. The nearest sensitive receptors to the Project Area (residences) are over one mile from the proposed well (Figure 2).

2.2 Current Oil and Gas Operations

The McDonald Anticline Oil Field is an active oil field. The field is developed with 38 active wells operated by three different operators. The Carneros Creek Oil Field is an active oil field. The field is developed with 6 active wells operated by one operator.

Bidr does not currently have any oil and gas operations within the Project Area.



Figure 1 - Project Location Map (created January 21, 2024)



Figure 2 - Location of Sensitive Receptors in Relation to the Project Area (created November 8, 2023)

2.3 Project Components

The Project would be constructed on approximately 2.1 acres of undisturbed land. It would consist of constructing a new well pad (involving vegetation removal and grading), drilling one well, and construction of an associated temporary crude oil production storage facility. A plot plan of the proposed well pad and associated equipment is shown in Figure 3.

Fluid handling lines are necessary for oil production. Liquid (oil and water) from the wellhead would be routed to a wash tank for separation into oil and water. The oil is sold via trucks or a pipeline sales system. Water would be sampled and profiled for disposal at an appropriate waste management facility. The tanks will be on vapor recovery (VRU), with the captured gas going to a heater or well head engine. Figure 3 details the flow from the well.

2.4 Project Construction

Work is anticipated to occur five days per week from 7 AM to 5 PM for preparation of the well pad site and installation of associated ancillary equipment. Due to the complexity of drilling and the hazards associated with leaving a well unattended during the drilling process, drilling operations are typically conducted 24 hours per day. Drilling activities will be performed seven days per week.

Construction would occur in five phases, listed below:

- Grading (12 days)
- Rig Setup (3 days)
- Well Drilling (18 days)
- Rig Decommission (3 days)
- Facility Construction (20 days)

A construction crew of up to 22 people would be required to complete the proposed Project. Construction crews would be hired from the Kern County region. Table 2.4-1 below lists the expected equipment that would be used to construct the well pad, drill the well, and construct temporary production facilities.

During site preparation activities the well pad site would be graded, watered, and compacted to establish a level and solid foundation for the drilling rig and temporary production facilities. Topsoil would be stabilized, consistent with San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation XIII requirements. Earthmoving activities would be limited to a combined total disturbance of less than 2.1 acres.

Nighttime lighting may be used during construction and drilling operations but would be removed following completion of the Project. The grading phase would include dirt work to prepare the site for the well pad, as well as drilling and setting the well conductor,

cellar, rat hole, and mouse hole. The rig setup phase would consist of mobilization of the rig on the well pad site. The drilling phase would consist of drilling and various tasks associated with the drilling, including installation of blowout prevention equipment, cementing, mudlogging, etc. The rig decommission phase would consist of the de-mobilization of the rig from the well pad site. The facility construction phase would include the installation of production facility equipment and associated welding activity.

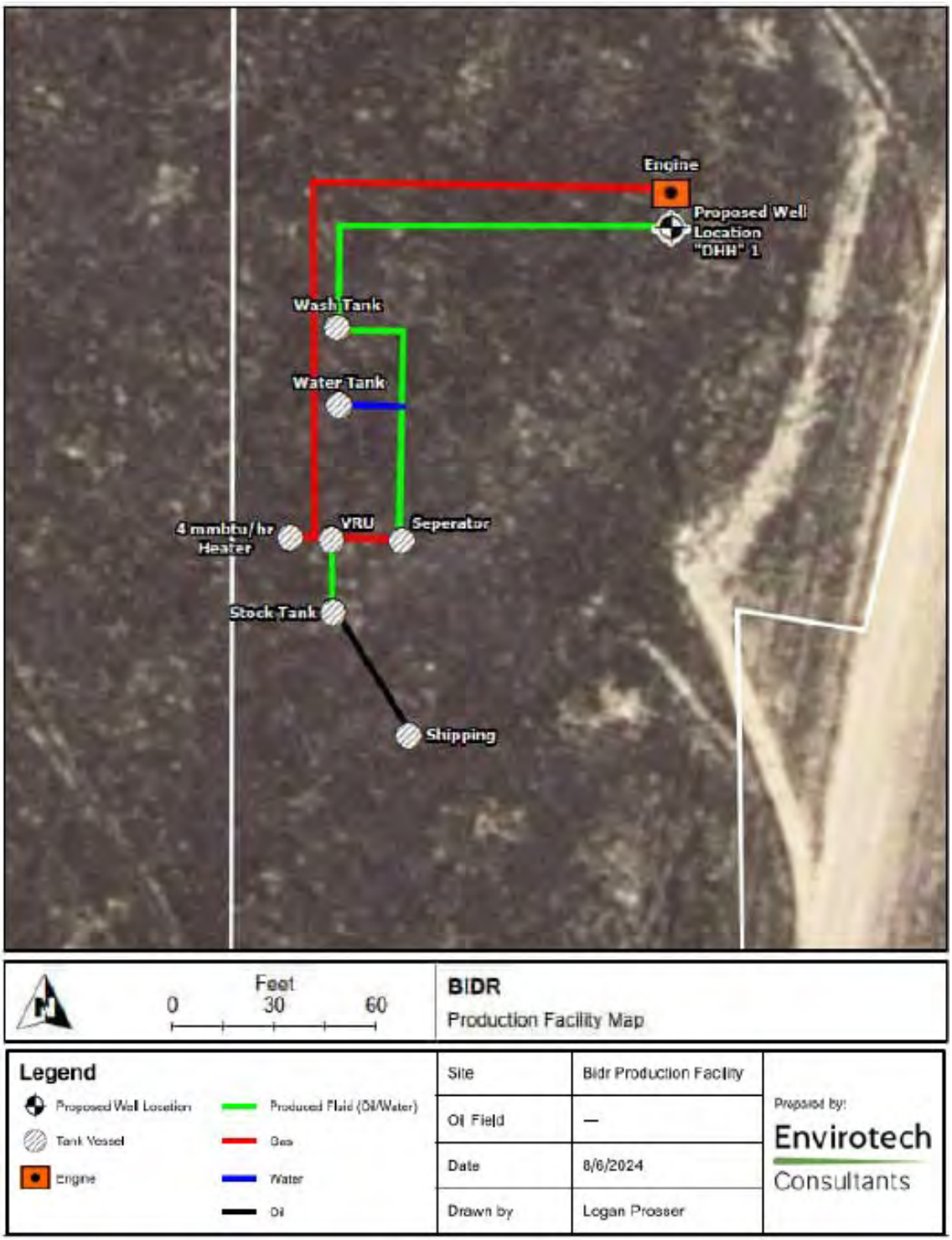


Figure 3 – Plot Layout of Proposed Well Pad and Associated Equipment (created August 6, 2024)



Figure 4 - Proposed Well Location (created January 10, 2024)

Table 2.4-1 Construction Equipment Required for Each Phase

Project Activity	Equipment	Quantity	Total Operating Hours/Day	Horsepower[1]
Grading (12 Days)	Dozer	1	8	150
	Grader	1	8	224
	Excavator	1	8	248
	Drill Rig	1	2	185
	Pump	1	3	84
	Loader	1	8	164
Rig Setup (3 Days)	Forklift	1	10	150
	Crane	1	10	231
	Welder	1	10	46
Well Drilling (18 Days)	Drill Rig	1	24	650
	Mudpump	2	24	1000
	Genset, Main Rig	2	24	400
	Genset, Instrumentation	1	24	127
	Forklift	1	8	150
	Genset, Controls	3	24	60
	4000w Light Tower	3	12	15
	8000w Light Tower	3	12	30
	Backhoe	1	12	97
	Welder	2	24	46
Rig Decommission (3 Days)	Forklift	1	10	150
	Crane	1	10	231
	Welder	2	10	46
Tank Facility Construction (20 Days)	Crane	1	4	231
	Forklift	2	6	89
	Backhoe	2	8	97
	Welder	2	8	46

Notes: [1] Default CalEEMod values are assumed unless project-specific equipment data was provided.

All offroad construction equipment will need to be mobilized to the Project Area. The Project Area would be accessed via existing access roads, including Seventh Standard Road. Equipment and materials hauling vehicles would primarily get to and from the site using Seventh Standard Road which connects to State Highway 33. Worker and vendor trips for grading and facility construction were modelled using 18 workers and 18 vendors per day at two trips per person and were based on travel from Bakersfield, CA, at 50 miles each way. Worker and vendor trips for drilling were modeled using 22 workers and 18 vendors per day at two trips per person and were based on travel from Bakersfield, CA, at 50 miles each way. Worker and vendor trips for rig setup and rig decommission were

modelled using 10 workers and 12 vendors per day at two trips per person and were based on travel from Bakersfield, CA, at 50 miles each way.

Soil cuttings and water generated during the well installation will be stored onsite pending waste profile analysis. Soil will be stored in stockpiles placed on plastic sheeting and covered with plastic sheeting. Water will be stored in half bins. One water sample will be collected from each half bin at the completion of drilling and a representative composite soil sample will be collected from the soil cuttings for purposes of waste profiling. Following waste profiling, if the derived waste is found to be contaminated it will be properly disposed of in accordance with federal and state requirements at the appropriate off-site facility. Waste that is not contaminated may be spread on site. Approximately 16,000 barrels (bbl) (672,000 gallons) of water would be required to drill the well (note 1 bbl is equal to 42 gallons). Water would also be used for dust control during project construction. Exposed areas will be watered twice per day, for a total use of approximately 14,000 bbl (worst case 250 bbl per day). Water for drilling and dust control would be obtained from the Belridge Water Storage District through a nearby operator. The water would be delivered by tanker truck generating approximately two vehicle trips per day.

Table 2.4-2 summarizes the vehicle trips associated with Project activities. Where Project-specific information is not known, the trip lengths for vendor and haul trips during construction are based on assumptions for Kern County as included in the CalEEMod database. Workers are assumed to travel from the surrounding communities in the Bakersfield area. Water transport is included in the haul trucks category.

Table 2.4-2 Construction Worker, Vendor, and Hauling Trips by Phase

Phase Name	Workers		Vendors		Haul Trucks	
	Number of One-Way Trips Per Day	One-Way Length (miles)	Number of One-Way Trips Per Day	One-Way Trip Length (miles)	Number of One-Way Trips Per Day	One-Way Trip Length (miles)[3]
Grading (12 Days)	36	50	36	50	16	50
Rig Setup (3 Days)	20	50	24	50	30	50
Well Drilling (18 Days)	44	50	36	50	36	50
Rig Decommission (3 Days)	20	50	24	50	30	50
Facility Construction (20 Days)	36	50	36	50	16	50

2.5 Project Operation

Following completion of construction activities, the well would be temporarily operated under CalGEM permit requirements by Bidr. Depending on well production volumes, long-term operation of the proposed Project would require additional oil processing and storage equipment at the well pad site. The temporary equipment would be utilized until permanent facilities can be constructed. Any CalGEM, County and SJVAPCD permits would be acquired as necessary for this equipment. Temporary and long-term operational activity for the well would involve at least two visits to the well pad site per day in a worker truck with a roundtrip distance of 100 miles. Fluids produced by the well would initially be transported via vacuum trucks and hauled approximately five miles to an existing facility. This equates to one vacuum truck trip per day to the well pad site with a modeled worst-case roundtrip distance of 100 miles. If propane is used for the tank's heater, this would add 1-2 trucks per week to supply propane storage. Depending on well production, permanent processing and equipment would be installed at the well pad site. Permanent equipment necessary for operation of the well and production facility is listed in the Air Quality Impact Analysis included in Appendix A. Otherwise, the well will be plugged and abandoned, the appurtenant facilities decommissioned, and the well site restored in accordance with applicable requirements.

2.6 Project Design Features

Table 2.6 below presents a list of project design features (DFs) and/or applicable regulatory requirements (RRs) that contribute to minimizing the potential environmental impacts of the Project.

Table 2.6-1 Project Design Features or Regulatory Requirements

#	Design Feature or Regulatory Reference	Potential Impact Category
RR-AIR-1	Compliance with SJVAPCD Rule 2201 (New and Modified Stationary Source Rule)	Air Quality
RR-AIR-2	Compliance with SJVAPCD Rule 2010 (Authority to Construct and Permit to Operate)	Air Quality
RR-AIR-3	Compliance with SJVAPCD Rule 2280 (Portable Equipment Registration)	Air Quality
RR-AIR-4	Compliance with SJVAPCD Rule 4101(Visible Emissions)	Air Quality
RR-AIR-5	Compliance with SJVAPCD Rule 4623 (Storage of Organic Liquids)	Air Quality
RR-AIR-6	Compliance with SJVAPCD Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities)	Air Quality

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RR-AIR-7	Compliance with SJVAPCD Rule 8031 (Bulk Materials)	Air Quality
RR-AIR-8	Compliance with leak detection and repair (LDAR) practices in accordance with SJVAPCD and CARB regulations	Air Quality
DF-EN-1	The Project includes several energy- and fuel-efficient design features	Energy
RR-EN-1	Compliance with CARB anti-idling and emissions requirements specified in 13 C.C.R. § 2485	Energy
RR-EN-2	Compliance with CARB Off-Road Diesel Regulations as required by 23 C.C.R. § 2449	Energy
RR-GEO-1	Compliance with most recently adopted building codes	Geology and Soils
RR-GHG-1	Compliance with Measure I-2 of the AB 32 Scoping Plan	GHGs
RR-GHG-2	Compliance with the AB 32 Cap-and-Trade Program	GHGs
RR-GHG-3	Compliance with SJVAPCD Rule 2260 (Registration Requirements for Equipment Subject to California's Oil and Gas Regulation)	GHGs
RR-GHG-4	Compliance with SJVAPCD Rule 4409 (Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities)	GHGs
RR-GHG-5	Compliance with federal New Source Performance Standards specified in 40 CFR Part 60	GHGs
RR-GHG-6	Compliance with California Emission Standards for Off-road Compression-Ignition Engines as specified in 13 C.C.R. § 2423(b)(1).	GHGs
RR-HAZ-1	Compliance with 14 C.C.R. § 1774.2, which requires a Pipeline Management Plan	Hazards and Hazardous Materials
RR-HAZ-2	Compliance with all Kern County Fire Codes	Hazards and Hazardous Materials
DF-HYDRO-1	Water used for drilling and dust suppression during construction would be obtained from the Belridge Water Storage District through a nearby operator and delivered by truck.	Hydrology/Water Quality
DF-HYDRO-2	The Project would involve construction of an earthen well pad but graded prior to drilling	Hydrology/Water Quality
RR-HYDRO-1	Compliance with stormwater discharge requirements as specified in 40 C.F.R. §122.26(c)(1)(iii)	Hydrology/Water Quality

RR-HYDRO-2	Bidr will obtain coverage under the Construction General Permit (Construction General Permit Order 2009-0009-DWQ, as amended by 2010-00014-DWQ and 2012-0006-DWQ) in advance of construction activity, if required	Hydrology/Water Quality
DF-UTL-1	Waste generated during drilling of the well would be trucked offsite for disposal in an approved landfill	Uties and Service Systems
DF-UTL-2	Soil cuttings and water generated during the well installation will be stored onsite pending waste profile analysis	Utilities and Service Systems

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SECTION 3 Initial Study Environmental Checklist

This checklist has been prepared to document CalGEM's evaluation of the proposed Project and the determination of the appropriate level of environmental review under CEQA. The checklist used for the environmental evaluation was adapted from the environmental checklist form presented in Appendix G of the CEQA Guidelines. A discussion is provided for each environmental issue identified in the checklist.

For this checklist, the following designations are used:

- ***No Impact.*** The Project would not have any measurable environmental impact on the environment.
- ***Less Than Significant Impact.*** The Project may have the potential for affecting the environment, although these impacts will be below levels or thresholds that CalGEM, Kern County, or other responsible agencies consider to be significant.
- ***Less Than Significant Impact with Mitigation.*** The Project may have the potential to generate impacts that will have a significant impact on the environment. However, the level of impact may be reduced to levels that are less than significant with the implementation of mitigation measure(s).
- ***Potentially Significant Impact.*** The Project may result in environmental impacts that are significant and cannot be reduced to levels that are less than significant even with the implementation of mitigation measures.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

On the basis of this initial evaluation:

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

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

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

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

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

Signature _____ Date_____

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3.1 Aesthetics

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

Environmental Setting and Baseline

The Project Area is located adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields. The Project Area does not contain scenic vistas, scenic resources, or historic elements. There are no State Scenic Highways in the vicinity to the Project Area; there are no designated scenic highways in Kern County (Caltrans 2019).

Environmental Assessment

a, b) As noted above, there are no scenic vistas, scenic resources or scenic highways on the Project Area or vicinity and the Project Area is not visible from any of these resources; therefore, there would be ***no impact*** to scenic vistas or state scenic highways.

c) The Project is on private land and is not a designated scenic resource. The Project Area is not visible to the public from any major or secondary highways or roadways and is over one mile from the nearest residences. The Project is located adjacent to active oil fields. The new well pad and well would have the same visual characteristics as those already present. Therefore, there would be ***no impact*** to the existing visual character or quality of public views of the site.

d) Construction and operation activities would be typical of those already present at an active oil field. Lighting may be used during construction activity but would be removed following construction at any given drill site. The nearest residents and public roadways to the Project Area are over one mile away; therefore, while nighttime lighting may be visible, any effects would be minimal and temporary. No permanent nighttime lights would be installed at the well pad site. There would be no new source of nighttime lighting. Therefore, there would be ***less than significant impacts*** regarding light and glare.

3.2 Agriculture and Forestry Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the CARB. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting and Baseline

The Project Area is adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields on land mapped as "Grazing Land" on the Farmland Mapping and Monitoring Program of the California Resources Agency maps (CDOC 2022a). The Project Area is zoned as Exclusive Agriculture (A). Oil production is a permitted use under this designation, pursuant to Chapter 19.98 of the Kern County Zoning Ordinance (Kern County 2021), although no permitting by Kern County for oil and gas activities under this ordinance has occurred since the stay on January 26, 2023. The proposed well is within a Tier 2 Oil Conformity zone. The Kern County Zoning Ordinance designates Oil Conformity Tier 2 to "areas that are classified Exclusive Agriculture (A) or Limited Agriculture (A-1) Districts, have agriculture as the primary surface land use, and are not included in Tier 1." (Kern County 2021).

The Project Area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Adjacent parcels of land are enrolled in a nonprime Williamson Act Contract (Figure 5; Kern County 2023). However, the area for this Project is not enrolled in Williamson Act contracts.

The Project Area does not contain forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

Environmental Assessment

a) The Project Area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As such, ***no impact*** to these agricultural resources would occur.

b) The well that is proposed for drilling is not located on Williamson Act Contract lands. Therefore, ***no impact*** to existing agricultural zoning, uses, or Williamson Act contracts would occur.

c, d) The Project Area does not contain forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). As such, ***no impact*** to such forest/timber resources would occur.

e) All potential impacts would be limited to the Project Area itself. No disturbance would occur outside of the Project Area. There is no farmland or forest land in the Project vicinity that would be converted by the proposed Project. Therefore, ***no impact*** would occur.

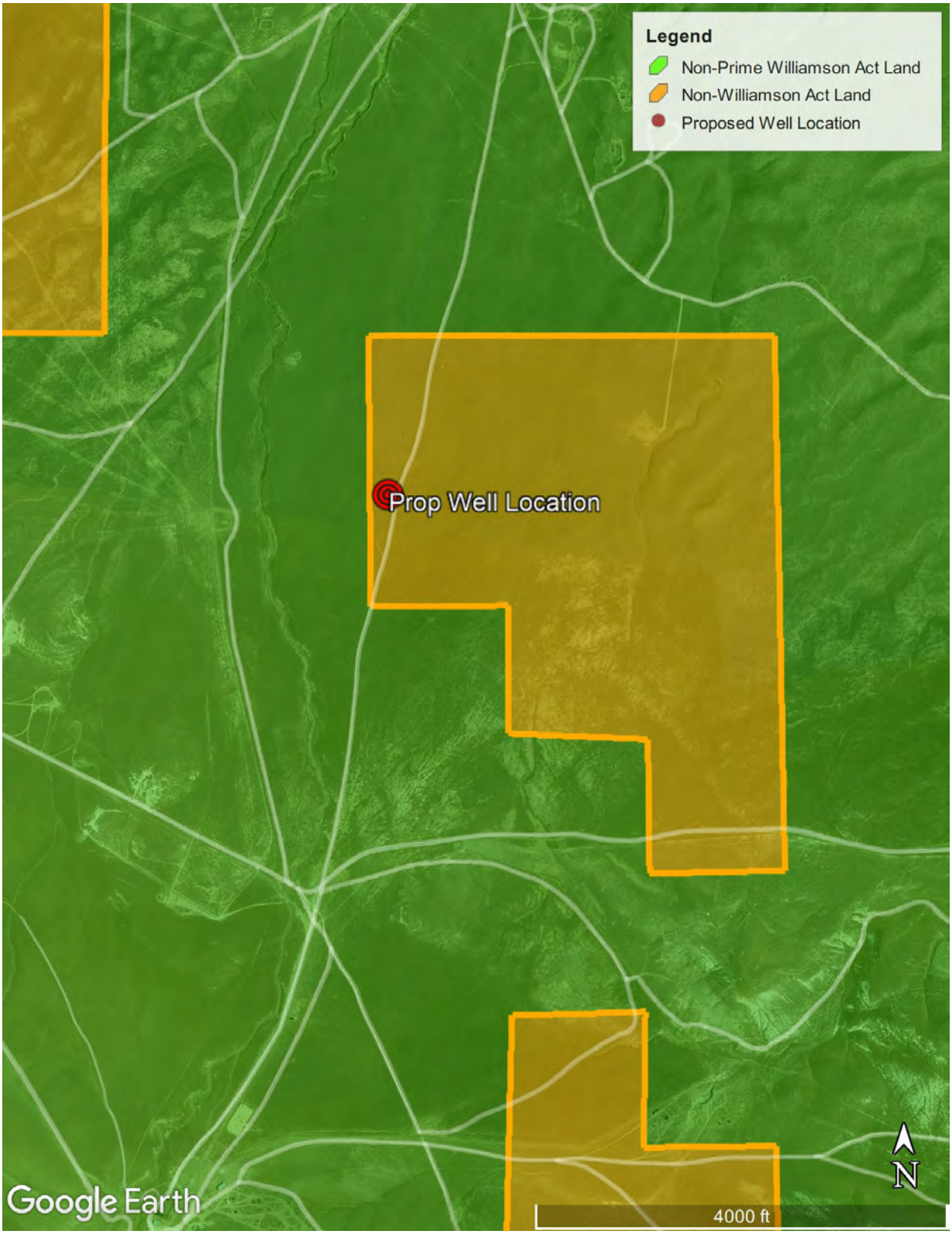


Figure 5 - Williamson Act Contract Areas and Proposed Well Location (created November 16, 2023)

3.3 Air Quality

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

Environmental Setting and Baseline

The Project Area is located within the San Joaquin Valley Air Basin. At the state level, air regulatory duties lie with the California Air Resources Board (CARB) and at the federal level with the U.S. Environmental Protection Agency (EPA), Region 9.

The federal Clean Air Act (CAA), as amended, and the California CAA contain the primary provisions relating to air quality. The EPA, CARB, and regional air districts have issued rules to implement federal and state CAAs. EPA uses "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health and the environment may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). One set of limits (primary standard) protects health; another set of limits (secondary standard) is intended to prevent environmental and property damage. Under the federal CAA, the EPA has established NAAQS for seven criteria pollutants: ozone, respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide, lead, and sulfur dioxide (SO_2). California has established state Ambient Air Quality Standards for the same criteria pollutants, plus an additional three pollutants

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(visibility reducing particulates, sulfates, and hydrogen sulfide (H_2S)). States may have standards that are more restrictive than the federal thresholds, but they cannot be less restrictive. Although more stringent, the State standards have no specific dates for attainment, unlike federal standards. Under State law, designations are made by pollutant, rather than by averaging time. A geographic area that meets or exceeds the primary standard is called an attainment area; areas that do not meet the primary standard are called nonattainment areas. Table 3.3-1 shows the attainment status of the San Joaquin Valley Air Basin for the state and federal standards. As shown in the table, the San Joaquin Valley Air Basin currently exceeds California Ambient Air Quality Standards for ozone, $PM_{2.5}$, and PM_{10}. The basin also currently exceeds NAAQS for ozone and $PM_{2.5}$ (SJVAPCD 2023). The air basin has been designated as a federal maintenance area for PM_{10}.

Table 3.3-1 California and National Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard	Federal Standard	Attainment Status	
				California	Federal
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m³)	revoked	Nonattainment/Severe	--
	8 hours	0.070 ppm (137 µg/m³)	0.07 ppm (137 µg/m³)	Nonattainment	Nonattainment/ Extreme
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m³	150 µg/m³	Nonattainment	Attainment
	Annual	20 µg/m³	revoked	Nonattainment	--
Fine Particulate Matter ($PM_{2.5}$)	24 hours	none	35 µg/m³	Nonattainment	Nonattainment
	Annual	12 µg/m³	9 µg/m³	Nonattainment	Nonattainment
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	Attainment	Attainment
	8 hours	9 ppm (10 mg/m³)	9 ppm (10 mg/m³)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (338 µg/m³)	0.100 ppm (188 µg/m³)	Attainment	Attainment
	Annual	0.030 ppm (56 µg/m³)	0.053 ppm (100 µg/m³)	Attainment	Attainment
Lead (Pb)	30 Day Average	1.5 µg/m³	--	Attainment	--
	Rolling three-month period, evaluated over a	--	0.15 µg/m³	--	Attainment

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Pollutant	Averaging Period	California Standard	Federal Standard	Attainment Status	
				California	Federal
	three-year period				
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	Attainment	Attainment
	3 hours	--	0.5 ppm (1300 µg/m³)	--	Attainment
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)	Attainment	--
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m³)	--	Unclassified	--
Sulfates	24 hours	25 µg/m³	--	Attainment	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m³)	--	Attainment	Unclassified
Visibility-Reducing Particles	8 hours	Extinction coefficient of 0.23 per kilometer (visibility of ten miles or more due to particles when relative humidity is less than 70 percent)	--	Unclassified	Unclassified

Notes: ppm = parts per million; ppb = parts per billion; mg/m³ = milligram per cubic meter; µg/m³ = micrograms per cubic meter; "--" = no standard.

The Project Area is within the EPA Pacific Southwest Region 9 Planning Area. A State Implementation Plan (SIP) has been prepared for the planning area, which identifies sources of emissions and control measures to reduce emissions. In 2022, CARB updated the State Strategy for achieving emissions reductions toward bringing the area into attainment with federal standards for ozone and $PM_{2.5}$.

District air quality plans that have recently been adopted and are relevant to the proposed Project include the SJVAPCD 2023 Maintenance Plan and Redesignation Request for the Revoked 1-Hour Ozone Standard, 2022 Plan for the 2015 8-Hour Ozone Standard, 2016 Plan for the 2008 8-Hour Ozone Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards, and 2007 PM_{10} Maintenance Plan. These plans outline the strategy for achieving federal air quality standards by specific dates and identify control measures to reduce criteria pollutant

emissions. Control measures identified in the 2022 Plan for the 2015 8-Hour Ozone Standard reduce ozone precursor emissions, nitrogen oxides (NO_x), and Volatile Organic Compounds (VOCs). Particulate matter attainment strategies include control measures to reduce dust from unpaved roads and construction activities.

CAA regulations also address the release of hazardous air pollutants (HAPs): chemicals that are known or suspected to cause cancer or other serious health effects, such as reproductive effects, birth defects, or adverse environmental effects. Some compounds of this type are regulated as Toxic Air Pollutants by the State of California. The EPA currently lists 188 compounds as HAPs, some of which, such as benzene, toluene, and formaldehyde, can be emitted from oil and gas development operations. NAAQS have not been set for HAPs; rather HAP emissions are controlled by source type- or industrial sector-specific regulations. H_2S gas is not regulated under the NAAQS or as a HAP; however, it is known to be hazardous and is monitored for health and safety at oil and gas sites.

Once air quality attainment demonstration Plans are adopted, the reductions necessary to meet the respective reduction mandates contained in the Plan(s) are achieved through prohibitory rules created and enforced by the local air quality board/Air Pollution Control District. Compliance with applicable Rules, Regulations, and land use and zoning requirements ensures continued movement towards achieving the SJVAPCD attainment goals.

The following SJVAPCD rules applicable to the proposed Project are described below.

- *Rule 2201 (New and Modified Stationary Source Rule):* The purpose of this rule is to provide for the review of new and modified stationary sources of air pollution and to provide mechanisms including emissions trade-offs by which Authorities to Construct such sources may be granted without interfering with the attainment and maintenance of ambient air quality standards and to ensure no net increase in emissions above specified thresholds from new and modified stationary sources of all nonattainment pollutants and precursors. (See **RR-AIR-1**.)
- *Rule 2010 (Authority to Construct and Permit to Operate):* The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. (See **RR-AIR-2**.)
- *Rule 2280 (Portable Equipment Registration):* Certain portable emissions units would be required for well drilling, service or workover rigs, pumps, compressors, generators, and field flares. (See **RR-AIR-3**.)
- *Rule 4101(Visible Emissions):* The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. (See **RR-AIR-4**.)
- *Rule 4623 (Storage of Organic Liquids):* The purpose of this rule is to limit VOC emissions from the storage of organic liquids. (See **RR-AIR-5**.)

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- *Regulation VIII (Fugitive PM_{10} Prohibitions):* The purpose of Regulation VIII is to reduce ambient concentrations of particulate matter (PM_{10}) by requiring actions to prevent, reduce, or mitigate anthropogenic fugitive dust emissions. Regulation VIII rules pertinent to the proposed Project include, but are not limited to, the following:
    - *Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities):* This rule limits fugitive dust emissions (PM_{10}) from construction, demolition, excavation, extraction, and other earthmoving activities. This rule applies to any such activity and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site. (See **RR-AIR-6**.)
    - *Rule 8031 (Bulk Materials):* The purpose of this rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials. (See **RR-AIR-7**.)

Environmental Assessment

a) The SJVAPCD has established thresholds of significance for criteria pollutant emissions during construction and operations, which are based on the SJVACPD's New Source Review offset requirements for stationary sources. Per SJVACPD guidance, a project would be determined to have a significant impact on air quality if the emission sums exceed the thresholds presented in Table 3.3-2.

Table 3.3-2 SJVAPCD Air Quality Significance Thresholds

Pollutant	Emissions (tons per year)	
	Construction	Operational per Lease Area
NO_x	10	10
SO_X	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15
CO	100	100
ROG (VOC)	10	10

Source: SJVAPCD 2015a

For the purposes of this analysis, short-term construction emissions and long-term operational emissions were determined utilizing the latest version of the CalEEMod model (version 2022.1) based on the assumptions described in Section 2, Project Description. All portable off-road construction diesel engines are registered under CARB's Statewide Portable Equipment Registration Program and meet California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations (C.C.R.), Title 13, section 2423(b)(1). All off-road mobile construction equipment will be at least Tier 2. The proposed equipment listing is in Appendix A.

For this analysis, it is assumed that the well pad, well, and ancillary equipment are installed in a single year. The calculated unmitigated and mitigated emissions associated with construction of the Project are provided in Table 3.3-3. The emissions are calculated assuming that one well would be drilled with subsequent construction of associated ancillary facilities (i.e., installation of flowlines, electrical, and pumping units) and provide total emissions in tons per year for the proposed activity. Further, to ensure that construction emissions remain below the emissions thresholds specified in Table 3.3-2, Bidr would require that all portable off-road construction diesel engines are registered under CARB's Statewide Portable Equipment Registration Program and that all off-road mobile construction equipment meet Tier 2 or better. Bidr would also develop and implement a Fugitive Dust Control Plan for the Project in compliance with SJVAPCD fugitive dust suppression regulations. Accordingly, Table 3.3-3 also provides the mitigated construction emissions for the Project.

The annual emissions associated with operation of the well are presented in Table 3.3-4. Emissions from Project operation and maintenance were modeled utilizing CalEEMod assuming that the well head pump will be powered by either recovered gas supplying a permit-exempt electric generator (less than150 kW/day) or a permit-exempt well head engine powered by produced gas or commercial propane (Appendix A).

Table 3.3-3 Construction Criteria Pollutant Unmitigated and Mitigated Emissions

Pollutant	Unmitigated Construction Emissions (Tons/Year)*	Mitigated Construction Emissions (Tons/Year)*	Above SJVAPCD Threshold?
NO_x	2.71	2.71	No
SO_X	.0052	.0052	No
PM_{10}	13.51	13.51	No
$PM_{2.5}$	1.44	1.44	No
CO	1.98	1.98	No
ROG	0.14	0.14	No

Source: Refer to Appendix A, CalEEMod 2023 Emissions Data, for CalEEMod assumptions used in this analysis.

Notes: * As per the SJVAPCD 2015, a minimum of Tier 2 is used. But CalEEMod cannot calculate a scenario where only no Tier 1 engines are used. As there would be limited equipment used as part of this project, Tier 2 equipment might be used for both the unmitigated and the mitigated scenarios. Therefore, the highest emissions levels are used for both cases from the Air Quality Appendix A to determine significance.

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Table 3.3-4 Operational Criteria Pollutant Unmitigated and Mitigated Emissions

Pollutant	Unmitigated Operational Emissions (Tons/Year)	Mitigated Operational Emissions (Tons/Year)	Above SJVAPCD Threshold?
NO_x	0.54	0.54	No
SO_X	0.03	0.03	No
PM_{10}	0.12	0.12	No
$PM_{2.5}$	0.09	0.09	No
CO	0.90	0.90	No
ROG	0.28	0.28	No

Source: Refer to Appendix A, CalEEMod 2023 Emissions Data, for CalEEMod assumptions used in this analysis.

Operation of the well would not exceed the SJVAPCD Operational Emissions thresholds. As described in Table 2.6 and Section 3.1, several SJVAPCD rules would minimize air quality impacts, such as Rules 2201 (**RR-AIR-1**), 2010 (**RR-AIR-2**), 2280 (**RR-AIR-3**), 4101 (**RR-AIR-4**), 4623 (**RR-AIR-5**), 8021 (**RR-AIR-6**), and 8031 (**RR-AIR-7**). For example, compliance with Regulation VIII (**RR-AIR-6** and **RR-AIR-7**) would minimize particulate emissions by watering unpaved access roads in the Project Area and watering soils prior to excavation and trenching and during backfilling while compacting. Implementation of the existing regulatory mechanisms would further minimize the increase in potential emissions related to the operation of the proposed Project. Accordingly, assuming full compliance with the regulatory requirements detailed above the Project would not emit criteria pollutants above the SJVAPCD's established thresholds (Table 3.3-2) and would comply with SJVAPCD permit requirements. The operation of the well would not conflict with or obstruct implementation of the applicable air quality plan and impacts would be ***less than significant***.

b) The Project would emit criteria pollutants from the use of combustion sources such as diesel drills and completion/workover rig engines, drill pad construction equipment (e.g., dozers, backhoe, grader, etc.), equipment trucks, water trucks, drill rig crew trucks/vehicles, and portable lift equipment; through venting or fugitive losses from use of chemicals; or valves and fittings, pumps, compressors; and the well head. Impacts to air quality would occur also during Project construction as a result of soil disturbance and fugitive dust emissions.

Although the San Joaquin Valley Air Basin is in non-attainment for ozone, $PM_{2.5}$, and PM_{10}, Project construction would not generate emissions above the SJVAPCD thresholds. Additionally, Project operational and maintenance emissions would not result in a net increase in emissions due to compliance with Rule 2201. Therefore, the Project would have ***less than significant impact*** on cumulatively considerable pollutant increases.

c) The nearest sensitive receptors to the Project Area are over one mile from the nearest well, as shown in Figure 2. As shown in Table 3.3-3, construction emissions would be below the SJVAPCD threshold. Operations would result in emissions associated with operation and maintenance of the well. The risk associated with the project for sensitive receptors, including residences, businesses, and schools, was calculated using the SJVAPCD "Prioritization Calculator," as shown in Exhibit J of the Air Quality Impact Analysis found in Appendix A. The calculator was developed by SJVAPCD using the California Air Pollution Control Officers Associations' (CAPCOA) methodology. The prioritization calculation evaluated the impacts to receptors for the identified toxic substances. The toxic substances associated with this Project include diesel exhaust emissions for both the construction and operational phases. The diesel PM10 exhaust emissions were calculated using CalEEMOD.202.4.0 and the results were input into the model. The air quality impact of the proposed Project is not likely to affect the nearest receptors. The results of the "Prioritization Calculator," based on the receptor distances, is less than 10. Based on the receptor proximity and proximity factors, the calculated Total Max Score was 0.697 for receptors greater than 2,000 meters. As such, impacts to sensitive receptors would be ***less than significant***.

d) The Project may create odors during construction and operation activities. However, the nearest residential receptor is over one mile from proposed Project construction, operation, and maintenance activities. Diesel fuel would be used in trucks and construction equipment. Diesel fuel is considered an objectionable odor; however, Project construction activities are temporary and mobile in nature and would not be located adjacent to any single receptor for long periods of time. Further, California ultralow sulfur diesel fuel with a maximum sulfur content of 15 ppm by weight would be required to be used in all diesel-powered equipment, which would minimize emissions of sulfurous gases (SO_2, H_2S, carbon disulfide, and carbonyl sulfide) and, thus, would minimize odors during Project construction. Therefore, due to the temporary and mobile nature of Project construction, as well as the limited amount of time and equipment required for Project construction activities, impacts associated with objectionable fumes and odors caused by combustion of diesel fuel would be ***less than significant***.

Operation of the Project would include an odor source such as a production well. During Project operation, potential sources of odor are fugitive emissions from the flanges, pressure relief devices, and other connections associated with the wellheads. As a result, there may be a potential increase in odors from the Project Area compared to the baseline. In the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015b), oil and gas production facilities are not included in the list of common facilities that are likely to have potentially significant odor emissions. However, the SJVAPCD recommends an approach for evaluating Project-specific odor impacts based on SJVAPCD complaint records, and a screening level analysis. Specifically, the SJVAPCD recommends that their Compliance Department be contacted to request information on odor compliance logged for the facility (if existing), for the previous three years. If the facility is not identified in the District's Compliance Database nor does it currently exist,

the odor analysis will be based on review of odor complaints for "similar facilities." Per the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts, significant odor problems are defined as:

- More than one confirmed complaint per year averaged over a three-year period; or
- Three unconfirmed complaints per year averaged over a three-year period.

Accordingly, odor complaint records for "similar facilities" (i.e., oil field operations) for years 2019 through July 2023 were provided by the SJVAPCD and reviewed as part of the screening analysis. Complaints associated with refining facilities were excluded from the review as not representative of proposed Project operations. The SJVAPCD odor complaint records were provided for permitted and non-permitted activities. For oil field operations, permitted equipment used for crude oil and natural gas production and processing has a potential to release odors. During operations, odors from leaking or venting components are possible. This potential is minimized by the implementation of **RR-AIR-8**, compliance with LDAR practices in accordance with SJVAPCD and CARB regulations. Tanks are constructed at a minimum to include pressure-vacuum relief valves set to within 10 percent of the designed tank working pressure, minimizing odor emissions. Furthermore, tanks are potentially required to be constructed with vapor recovery systems in accordance with SJVAPCD and CARB regulations. Non-permitted activities with a potential to release odors consist mainly of on-road travel and well maintenance. During well maintenance, a fluid is normally introduced into the well bore, and the hydraulic pressure exerted by the fluid prevents gas from escaping into the atmosphere. Diesel-fueled trucks traveling on local roadways would produce exhaust odors that could be considered offensive to some individuals. Although, in general, odors associated with diesel fumes are temporary and disperse rapidly with distance from the source, exposure of receptors to objectionable odor emissions from mobile sources represent an unavoidable nuisance.

During the period from 2019 through July 2023, there were a total of 26 complaints associated with permitted oil field equipment (excluding refining facilities) within the entire SJVAPCD jurisdiction. Of the 26 total complaint records associated with permitted equipment, seven were confirmed and resulted in a Notice of Violation and the other 19 were either unconfirmed or were resolved with no violation. Two of the seven complaints that resulted in a Notice of Violation were associated with one specific odor event that occurred on July 13, 2022. The number of unconfirmed complaints exceeds the threshold of significance (more than three unconfirmed complaints averaged over a three-year period). The number of confirmed complaints is also greater than three total complaints over the three-year period of record. Of the 16 unconfirmed complaints, seven were associated with a single odor event on February 19, 2021. The nearest complaint to the Project Area was in the city of Lost Hills approximately 12 miles northeast. The screening analysis indicates that operation of permitted and non-permitted oil field operations may result in an appreciable concentration of emissions of odorous compounds. However, any emission of odorous compounds that may be associated with the Project is not

expected to be perceptible at the nearest sensitive receptor more than one mile from Project activities given distance and dispersion. In addition, as noted above, the operation of permitted equipment used for crude oil and natural gas production and processing is potentially subject to SJVAPCD and CARB LDAR and tank emission control requirements. Accordingly, through compliance with applicable Leak Detection and Repair requirements (**RR-AIR-8**) as well as New Source Performance Standards found in 40 CFR Part 60 (**RR-GHG-5**) in addition to the distance of Project activities from any potential receptors of more than one mile, the potential for odors resulting from Project operations to adversely affect a substantial number of people would be ***less than significant***.

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3.4 Biological Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting and Baseline

A biological technical report was prepared for the Project (Padre Associates 2023a) and is included as Appendix B to this IS. The query for Carneros Rocks and eight surrounding United States Geological Survey (USGS) 7.5-minute quadrangles within the San Joaquin Valley (Las Yeguas Ranch, Shale Point, Blackwells Corner, Lost Hills, Belridge, Reward, McKittrick Summit, and Simmler) of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Data Base, California Native Plant Society (CNPS)

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Rare Plant Inventory List, United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation planning tool, and USFWS Critical Habitat Report indicates that various special status species have been recorded in the vicinity of the Project Area (Tables 3.4-1 and 3.4-2). There is no designated critical habitat in the Project Area or vicinity. The detailed Biological Technical report is included in Appendix B.

Table 3.4-1 Plant Species with Potential to Occur in the Proposed Project Area

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
Allium howellii var. *howellii* Howell's onion	-/4.3	Valley and foothill grassland, grassy slopes; sometimes within clay or serpentinite soils; 50-2200 m.	Mar-Apr	Low– No records of the species within the Project's quad. Clay soil is present in the Project Area. There is a record of the species 9 miles northwest of the Project (Calflora, 2023).
Amsinckia furcata Forked fiddleneck	-/4.2	Cismontane woodland, valley and foothill grassland, semi-barren loose, shaly slopes; 50-1000 m.	Feb-May	Low – Potential habitat is present. No recorded occurrences within the Project quad. The nearest occurrence is in the Carrizo Plain National Monument.
Androsace elongate ssp. *acuta* California androsace	-/4.2	Slopes within Chapparal, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, foothill woodland; 150-1305 m.	Mar-Jun	Absent – No recorded observations within the Project Area or quad. Records of the species are primarily in areas with foothills.
Antirrhinum ovatum Oval-leaved snapdragon	-/4.2	Chapparal, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland, on gentle and open slopes, disturbed areas, sometimes gypsum, often in alkaline soils and sometimes in clay soils; 200-1000 m.	May-Nov	Moderate – There is a record of this species 4.8 miles north of the Project Area (CCH1, 2023). Clay soil is present. Slopes are not present within the Project Area but are in the surrounding area.
Atriplex coronata var. coronata Crownscale	-/4.2	Chenopod scrub, valley and foothill grassland, vernal pools, alkaline and clay soils; 1-590 m.	Mar-Oct	Low – Multiple occurrences near McKittrick, Reward and Lost Hills. Clay soils and grassland habitat are present, however, no records within Project location or quad.
Atriplex coronata var. vallicola Lost Hills crownscale	-/1B.2	Chenopod scrub, valley and foothill grassland, freshwater wetlands, dry ponds, alkaline soils; 50-635 m.	Apr-Sep	Absent – Wetlands, vernal pools/ponds are not present within the Project Area. No occurrences of species in Project quad.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
Atriplex flavida Carrizo Plain crownscale	-/1B.3	Chenopod scrub, valley and foothill grassland, vernal pools in alkaline soils; 585-605 m.	Mar-Jul	Absent – No records of this species in Kern County. Project Area is not within elevation range for the species.
Canbya candida White pygmy-poppy	-/4.2	Joshua tree woodland, desert scrub, pinyon and juniper woodland in granitic, gravelly and sandy soils; 600-1450 m.	Mar-Jun	Absent – Habitat is not present within the Project Area. Project Area is outside of the elevation range for the species.
Caulanthus californicus California jewelflower	FE, SE/1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland, flats, slopes, within non-alkaline, sandy substrate; 61–1000 m.	Feb-May	Low – No records within Project quad. Grassland habitat is present. Records near Lost Hills, Carrizo Plain, and McKittrick.
Caulanthus lemmonii Lemmon's jewelflower	-/1B.2	Pinyon and juniper woodland, valley and foothill grassland; 80-1580 m.	Feb-May	Low – No records within the Project Area or quad. Habitat is present. Records within the McKittrick Summit and Reward quads.
Clarkia xantiana ssp. *parviflora* Kern Canyon clarkia	-/4.2	Chenopod scrub, cismontane woodland, valley and foothill grassland, roadsides, slopes, rocky and sandy soils; 700-3620 m.	May-Jun	Absent – Project is outside of elevation range for species.
Delphinium recurvatum Recurved larkspur	-/1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland; within alkaline substrate; 3-790 m.	Mar-June	Moderate – Habitat present. However, requires poorly drained, fine, alkaline soils and *Atriplex* scrubs (Jepson, 2023). Project Area has non-alkaline soils and no *Atriplex* scrubs.
Eremalche parryi ssp. *kernensis* Kern mallow	FE/1B.2	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland; dry, open sandy to clay soils; often at edge of balds; alkali flats; 70-1290 m.	Jan-May	Moderate – Species record 8 miles southeast of Project Area, and various records near Belridge. Project Area has clay soils and grassland. No records within Project location or quad.
Eriastrum hooveri Hoover's eriastrum	FD/4.2	Chenopod scrub, valley and foothill grassland, pinyon juniper woodland; within alkaline gravelly substrate; 50-915 m.	Mar-July	Low- No gravelly substrate observed within the Project Area. No records within the Project quad, but multiple records in surrounding quads.
Eriogonum gossypinum	-/4.2	Chenopod scrub and valley and foothill	Mar-Sep	Moderate – Grassland habitat and clay substrate is present. Record of

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
Cottony buckwheat		grassland within clay substrate; 100-550 m.		species 2.7 miles east of the Project Area.
Eriogonum nudum var. indictum Protruding buckwheat	-/4.2	Chaparral, chenopod scrub, cismontane woodland in clay and serpentinite soils; 150-1463 m.	May-Oct	Absent – Habitat is not present within the Project Area.
Eriogonum temblorense Temblor buckwheat	-/1B.2	Valley and foothill grassland, clay and sandstone; 300-1000 m.	May-Sep	Absent– Grassland habitat and clay soil are present within the Project Area. Multiple records in Carneros Rock quad near Carneros Canyon. However, records are in hillier areas.
Eryngium spinosepalum Spiny-sepaled button-celery	-/1B.2	Valley and foothill grassland, usually occurs in wetlands, vernal pools; 80-975 m.	Apr-Jun	Absent – Wetlands are not present within the Project Area. Quad with nearest record is in Simmler.
Eschscholzia hypecoides San Benito poppy	-/4.3	Chaparral, cismontane woodland, valley and foothill grassland, grassy areas in woodlands and chaparral, clay and serpentine soils; 200-1500 m.	Mar-Jun	Absent – Project is outside of the California Floristic Province, Inner South Coast Ranges, in which the species is found.
Eschscholzia lemmonii ssp. *kernensis* Tejon poppy	-/1B.1	Chenopod scrub, valley and foothill grassland; 160-1000 m.	Mar-May	Absent – Project is outside known range of Western Transverse Ranges and Tehachapi Mountain area (Jepson eFlora, 2023). No records within the Project Area.
Eschscholzia rhombipetala Diamond-petaled California poppy	-/1B.1	Valley and foothill grassland in alkaline and clay soils; 0-975 m.	Mar-Apr	Absent – No records within the Project Area or quad. Records are within the foothills of the Coast Range.
Fritillaria agrestis Stinkbells	-/4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland, clay and serpentine (sometimes) soils; 10-1555 m.	Mar-Jun	Absent – Outside of the known range (Calflora 2023).
Lasthenia chrysantha Alkali-sink goldfields	-/1B.1	Vernal pools, alkaline; 0-200 m.	Feb-Apr	Absent – No habitat is present within the Project Area. Project is outside of elevation range for the species.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
Lasthenia ferrisiae Ferris' goldfields	-/4.2	Vernal pools, wetlands usually in alkaline or clay substrate; 20-700m	Feb-May	Absent – No wetland habitat present, not reported within general area. None have been observed within the Project Area.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	-/1B.1	Playas, marshes and swamps, vernal pools, coastal salt marsh, freshwater wetlands, alkali sink, wetland-riparian; 1-1220 m.	Feb-Jun	Absent – No wetland habitat present, not reported within general area. None have been observed within the Project Area.
Layia heterotricha Pale-yellow layia	-/1B.1	Cismontane woodland, coastal scrub. Pinyon and juniper woodland, valley, and foothill grasslands, sometimes in alkaline or clay substrate; 300-1705m	Mar-Jun	Absent – Outside of the known range (Calflora, 2023).
Layia munzii Munz's tidy-tips	-/1B.1	Chenopod scrub, valley and foothill grassland in alkaline clay soils; 150-700 m.	Mar-Apr	Absent – No records within Carneros Rocks (Project) quad. Alkaline soil is not present within the Project Area. Grassland and clay soil present within the Project Area.
Lepidium jaredii ssp. jaredii Jared's pepper-grass	-/1B.2	Valley and foothill grassland in alkaline and adobe soils, washes and slopes, alluvial fans; 335-1005 m.	Mar-May	Absent – Project Area is within the geographic range for the species, but outside of the elevation range. Soil preference and microhabitat are not present.
Madia radiata Showy golden madia	-/1B.1	Cismontane woodland, valley and foothill grassland, grassy and open slopes; 25-1215 m.	Mar-May	Absent – Project is outside of the California Floristic Province, Inner South Coast Ranges, in which the species is found.
Monolopia congdonii San Joaquin woollythreads	FE/1B.2	Chenopod scrub and valley and foothill grassland in sandy soils; 60-800 m.	Feb-May	Moderate – Padre has observed a population of the species approximately 2.6 miles north of the Project.
Puccinellia simplex California alkali grass	-/1B.2	Chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool, saline flats, and mineral springs; 2 – 930 m.	Mar- May	Absent – No habitat present. Occurs in saline flats, mineral springs which Project lacks. No recorded observations within the Project Area.
Stylocline citroleum Oil neststraw	-/1B.1	Open, stable, often crusted sand, clay, dry drainage edges, between *Atriplex* shrubs, chenopod scrub; coastal scrub; clay; 50-400 m.	March-April	Absent – Scrub habitat not present. No occurrences in the Project quad.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
Trichostema ovatum San Joaquin bluecurls	-/4.2	Chenopod scrub and valley and foothill grassland; 65-320 m.	April-Oct	High- Habitat present. No occurrences in the Project quad. The closest occurrence is 21 miles east (CNDDB) A species in the same genus *T. lanceolatum* was observed during surveys at the Project. *T. ovatum* was not observed.

Listing Status/Rare Plant Rank Codes:

CCH = Consortium of California Herbaria
CNNDB = California Natural Diversity Database Info (CDFW)
FD = Federally delisted (USFWS)
FE = Federally listed Endangered (USFWS)
SE = State-listed Endangered (CDFW)

CNPS (California Native Plant Society) Codes, California Rare Plant Rank:
1B = Plants Rare, Threatened, or Endangered in California and Elsewhere
4 = Watch List: Limited Distribution
0.1 = Seriously Threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 = Fairly Threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Source: Padre Associates 2023a

Table 3.4-2 Wildlife Species with Potential to Occur in the Proposed Project Area

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Invertebrates			
Branchinecta lynchi Vernal pool fairy shrimp	FT/-/-	Valley and foothill grassland, vernal pool, and wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Absent-No habitat present or reported within the general area. Project Area lacks vernal pools and wetlands.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Bombus crotchii Crotch's bumblebee	-/SCE/-	The Sierra-Cascade crest west to the coast of California and south to Mexico. Live in shrublands and grasslands and nest underground. Food plants include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Lupinus, Saliva Eriogonum*, *Asclepias*, *Eschscholzia*, *Chaenactis, and Medicago* (Williams et al 2014).	Moderate- Food plant and associated genera are present within the general area of the Project Area. Nearest record is 8 miles south of the Project Area (CNDDB, 2023).
Danaus plexippus Monarch butterfly – California overwintering population	FCE/-/-	Overwintering population. Closed-cone coniferous forests along the coast from northern Mendocino to Baja California, Mexico. Roost in wind-protected trees groves of Eucalyptus, Cypress, and Monterey pine, with water and nectar nearby. Require flowering plants for adult food source and milkweed (*Asclepias* spp.) plants for egg laying and larva food source.	Low – Project Area is outside of winter range. Species could potentially migrate near the Project Area. No milkweed is present within the Project Area. None have been observed within the Project Area.
Euproserpinus euterpe Kern primrose sphinx moth	FT/-/-	Occurs only in association with its host plant, elderberry (*Sambucus* spp.) in which they lay their eggs on.	Absent – Outside of known range (USFSW, 2019).
Amphibians			
Ambystoma californiense California tiger salamander- central California DPS	FT/ST/WL	Require underground refuges, especially ground squirrel burrows as upland habitat for aestivation and vernal pools or other season water sources for breeding.	Absent – Project Area is east of the Central Valley range (border of San Luis Obispo and western Kern County). No aquatic habitat present.
Rana draytonii California red-legged frog	FT/-/SSC	Occurs in or near quiet permanent water of streams, marshes, ponds, lakes and other quiet bodies of water. In summer, frogs estivate in small mammal burrows, leaf litter, or other moist sites in or near (within a few hundred feet of) riparian areas.	Absent – Project Area is outside of the geographic range for this species. No aquatic habitat present.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Spea hammondii Western spadefoot	-/-/SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands; vernal pools are essential for breeding and egg-laying.	Low – Grassland habitat is present with the Project Area. Project Area lacks vernal pools. Intermittent aquatic habitat could be present in the general area (Carneros Creek and other unnamed creeks). The closest record of this species is approximately 5.4 miles north of the Project from 2011 (CNDDB 2023). None have been observed within the Project Area.
Reptile			
Anniella alexanderae Temblor legless lizard	-/SCE/SSC	East of the Temblor Mountain Range in western Kern County and western Fresno County. They require loose soil, sand or leaf litter, within a variety of open habitats. They prefer soils with a high moisture content. Typically found in alkali desert scrub habitat (Center for Biological Diversity, 2021)	Low – Project Area is within the known range of the species. Potential habitat is present, however preferred habitat (alkali desert scrub) is not present within the Project Area but is found in the general area. Several ephemeral drainages run near the Project Area. Loamy soil may be present within the Project Area. Nearest record is 10 miles west of the Project Area (CNDDB 2023).
Anniella grinelli Bakersfield legless lizard	-/-/SSC	Found in the southern San Joaquin Valley; in the east side of the Carrizo Plain and within Bakersfield city limits. They occur in sparsely vegetated areas with moist, loose soil. Use leaf litter, rocks and logs for refuge.	Absent- Project Area is outside of known range of this species.
Arizona elegans occidentalis California glossy snake	-/-/SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalists reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Moderate – Potential habitat is present. Nearest record is 11 miles north of the Project Area from 2014 (CNDDB, 2023). None were observed on the Project Area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Emys marmorata northwestern pond turtle	-/-/SSC	Require aquatic habitats such as ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation below 6000 ft elevation. Require sites for basking and sandy banks or open grassy fields as upland habitat for egg-laying (up to .5 km from water).	Absent- Aquatic habitat is not present within the Project Area.
Gambelia sila Blunt-nosed leopard lizard	FE/SE/FP	Chenopod scrub; resident of sparsely vegetated alkali and desert scrub habitats in areas of low relief; seeks cover in mammal burrows, under shrubs or structures such as fence posts.	Moderate – Potential habitat is present; however, BNLL protocol-level surveys were conducted in 2023 and resulted in negative findings. BNLL are known to occur within 3 miles of the Project Area. The nearest record is on an access road 1.3 miles south of the Project Area from 2006. There are other records ranging from 1.9 to 4.4 miles from the Project Area along roads, from 2008-2013 (CNDDB 2023).
Masticophis flagellum ruddocki San Joaquin coachwhip	-/-/SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Requires mammal burrows for refuge and oviposition sites.	Moderate – Habitat present in and around the Project Area.
Phrynosoma blainvillii Coast horned lizard	-/-/SSC	Found in a wide variety of habitats such as alkali desert scrub, grassland blue oak woodland, but most common in lowlands along sandy washes with scattered low bushes. Require ant hills (specialized ant diet) with logs or rocks for basking and cover (Laudenslayer & Parisis, 2007).	Absent– Grassland habitat present. Specific habitat requirements are not present. The nearest record is 9.4 miles southwest of the Project Area.
Bird			
Agelaius tricolor Tricolored blackbird	-/ST/BLM S, SSC, RWL, BCC, MBTA	Highly colonial species. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Forages in agricultural fields and grassland habitat.	Absent – Foraging grassland habitat present; however, no suitable nesting habitat is present. No suitable water sources are present in or near the Project Area. The nearest CNDDB record is 4.5 miles northeast of the Project (CNDDB 2023).

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Aquila chrysaetos Golden eagle	-/-/FP, BE&GEPA, CMBPA	Rolling foothills, mountain areas, sage-juniper flats, and desert. Nests in large trees in open areas or canyons.	Moderate (Foraging)- The Project Area may be utilized as foraging habitat for golden eagle. Nesting habitat is not present within or near the Project Area.
Athene cunicularia Burrowing owl	-/-/BLM, SSC, CMBPA	Found in a variety of habitats. Open dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation in areas where fossorial mammals are already present.	High – Suitable habitat present. The nearest record is 10 miles north of the Project Area (CNDDB 2023).
Buteo swainsoni Swainson's hawk	-/ST/ CMBPA	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Moderate – Foraging habitat present; however, no nesting habitat was observed.
Charadrius montanus Mountain plover	-/-/SSC	Prefers short vegetation with bare ground and flat topography, prefers grazed areas with burrowing rodents in grasslands, plowed fields, grain fields and sod farms.	Moderate – Project is within wintering range and preferred habitat is present. The nearest record is approximately 10 miles north of the Project Area.
Charadrius nivosus nivosus Western snowy plover	FT/-/SSC	Needs gravelly, sandy or friable soils for nesting on sandy beaches, salt pond levees and shores of large alkali lakes.	Absent – Habitat is not present within the Project Area.
Empidonax traillii extimus Southwestern willow flycatcher	FE/SE/-	Riparian woodlands in southern California.	Absent – Habitat is not present within the Project Area.
Falco mexicanus Prairie falcon	-/-/WL	Dry, open habitats. Nests on cliffs. Forages far from breeding sites, even to marshlands and ocean shores.	Moderate (Foraging) – Nesting habitat is not present within or near the Project Area. The species could utilize the Project Area for foraging.
Gymnogyps californianus California condor	FE/SE/ FP, CMBPA	Requires large areas of remote country for foraging, roosting, and nesting. Roosts on large trees or snags or on isolated rocky outcrops and cliffs. Forages in open grasslands and oak savanna foothills.	Low – Foraging habitat is present. Nesting habitat is not present within the Project Area. Project Area is not in Critical Habitat for the species.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Haliaeetus leucocephalus Bald eagle	-/-/FP, BE&GEPA, CMBPA	Requires large area with good food base, perching areas and nesting sites. Typically found nesting near rivers, lakes, and marshes. May be found foraging in dry areas such as farmland and urban habitat.	Absent – No habitat present.
Toxostoma lecontei Le Conte's thrasher	-/-/SSC	Desert wash and desert scrub; commonly nests in dense spiny shrub or densely branched cactus in desert wash.	Absent – Scrub habitat not Present with the Project Area.
Mammal			
Ammospermophilus nelsoni San Joaquin (Nelson's) antelope squirrel	-/ST/-	Western San Joaquin Valley from 200-1200 feet elevation. On dry, sparsely vegetated loam soils, dig burrows or use kangaroo rat burrows; need widely scattered shrubs, forbs, and grasses in broken terrain with gullies and washes.	High –Habitat is present within the Project Area. In 2023, Padre observed SJAS 2.5 miles north and 3.5 miles southeast of the Project Area, along access roads. There is a record of SJAS 0.77 miles from the Project Area from 1987 (CNDDB, 2023).
Antrozous pallidus Pallid bat	-/-/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts need to be protected from high temperatures and are very sensitive to disturbance.	Low – Grassland habitat for foraging is present. Roosts sites are not present within Project Area, however, there is a nearby record approximately 2 miles southwest of the Project in a rocky area (CNDDB, 2023).
Dipodomys ingens Giant kangaroo rat	FE/SE/-	Grassland habitat on the western side of the San Joaquin Valley, marginal habitat in alkali scrub. Need level terrain and sandy loam soils for burrowing.	Low – Grassland habitat is present, and Project is within species range. No burrow precincts or other evidence of species' presence (caches, cleared plant litter around burrows) were observed at the site. The nearest record is 9.4 miles southwest of the Project from 2016 (CDFW, 2023).
Dipodomys nitratoides nitratoides Short-nosed kangaroo rat	-/-/SSC	Western side of San Joaquin valley in grassland and desert scrub (especially *Atriplex*) habitat. Friable soils, flat to gently sloping areas.	Moderate – Grassland habitat is present within the Project Area. Nearest record is approximately 10 miles east of the Project Area (CNDDB, 2023).

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Dipodomys nitratoides nitratoides Tipton kangaroo rat	FE/SE/-	Saltbush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley.	Absent – No scrub habitat is present within the Project Area.
Eumops perotis californicus Western mastiff bat	-/-/SSC, WBWG:H	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, etc.; roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Low – No suitable roosting habitat present.
Sorex ornatus relictus Buena Vista Lake ornate shrew	FE/-/SSC	Marshlands and riparian areas in the Tulare Basin. Prefer moist soil and use stumps, logs and litter for cover.	Absent – Habitat is not present within the Project Area. The Project area is outside of the designated Critical Habitat for this species.
Taxidea taxus American badger	-/-/SSC	Found in many habitats. Most abundant in drier open stages of most shrubs, forest, and herbaceous habitats. Needs sufficient food and open areas. Preys on burrowing rodents and digs burrows.	Moderate – Suitable habitat is present within the Project Area. The nearest record is approximately 14 miles south of the Project Area (CNDDB, 2023).
Vulpes macrotis mutica San Joaquin kit fox	FE/ST/-	Chenopod scrub and valley and foothill grassland; annual grasslands or grassy open stages with scattered shrubby vegetation.	High – Habitat is present within the Project Area. There have been multiple records in the general area. The nearest record is 0.4 miles north of the Project form 1988. There is also a record 1.7 miles northeast from 1975 (CNDDB, 2023).

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Federal Status/State Status/Other Status Codes: BE&GEPA = Bald Eagle and Golden Eagle Protection Act CMBPA = California Migratory Bird Protection Act CNDDB = California Natural Diversity Database Info (CDFW) FE = Federally listed Endangered (USFWS) FP = Fully protected under Fish and Game Code (CDFW) FT = Federally listed Threatened (USFWS) FCE = Federally Candidate Endangered (USFWS) SE = State-listed Endangered (CDFW) ST = State-listed Threatened (CDFW SCE = State Candidate Endangered (CDFW) SSC= Species of Special Concern (CDFW) WL = State Watch List (CDFW) WBWG = Western Bat Working Group H = Highest priority			

Source: Padre Associates 2023a

The Project Area and vicinity potentially support sensitive fauna and flora known to occur in the region. Padre Associates conducted botanical surveys and protocol-level blunt-nosed leopard lizard surveys in 2023 at the Project Area. During the course of the surveys, no sensitive species were observed within the Project Area. Very few small mammal burrows were observed within the Project Area. No potential dens (San Joaquin kit fox, American badger) were observed during the surveys.

The Project Area consists of annual non-native grassland habitat and disturbed lands. No naturally occurring rivers, streams or lakes were observed within the Project boundaries. The nearest aquatic feature, Carneros Creek, is approximately 0.2-mile west of the Project. Carneros Creek is defined by the National Hydrology Dataset (NHD) as an intermittent steam/river and by the National Wetland Inventory (NWI) as an intermittent riverine feature. An intermittent system may contain flowing water for only part of the year. When water is not flowing it may remain in isolated areas or dry up completely (ERMA, 2023). There are several other flowlines and unnamed intermittent and ephemeral water features surrounding the Project Area. However, no Project activities are planned within any aquatic features. No disturbance or impact is anticipated to any of the above-mentioned aquatic features.

Suitable habitat for various sensitive species is present within the Project Area. Certain wildlife species such as San Joaquin kit fox, American badger, burrowing owl, or other bird species may use the area for foraging or passing through the site. The area

surrounding the oil field is suitable habitat for these species as they may occur in areas that are already disturbed and/or currently being used for human activities.

Environmental Assessment

a) The Project Area is located adjacent to an active oil field on previously non-native grassland and disturbed land. A review of the USFWS Critical Habitat Report search determined that no critical habitat occurs within or near the Project Area. Under Federal and State law, no incidental take of any species listed as threatened or endangered under the federal Endangered Species Act or California Endangered Species Act or rare or endangered in the California Native Plant Protection Act may occur unless the incidental take is authorized by applicable state and federal wildlife agencies in the form of a permit or other written authorization, an approved state or federal conservation plan, or in accordance with an approved regional plan such as a Habitat Conservation Plan (HCP) and/or Natural Community Conservation Plan (NCCP). As described above, a number of special status species have the potential to travel through or forage near the site. Implementation of **MM-BIO-1** through **MM-BIO-13** would ensure the potential for adverse effects are minimized. Therefore, potential impacts to special status species would be ***less than significant with mitigation***.

MM-BIO-1 Pre-Disturbance Survey A pre-disturbance biological survey will be conducted by a Qualified Biologist. A Qualified Biologist is defined as a person with a combination of academic qualifications (minimum of 4 years of university or college education in biological sciences, zoology, wildlife biology, ecology, botany, or environmental science), professional field experience conducting biological surveys, and demonstrated knowledge and skills (i.e., field experience) related to the species and habitats present on the Project Area and the specific focused or protocol-level surveys conducted. The purpose of the pre-disturbance biological surveys is to confirm the potential presence and/or absence of any protected status species listed as threatened or endangered under the federal Endangered Species Act, threatened or endangered under the California Endangered Species Act, or designated as fully-protected in the California Fish and Game Code, and to confirm the presence and/or absence of any non-protected status sensitive species considered under California Environmental Quality Act.

The pre-disturbance biological survey will consist of walking belt transects to accomplish 100% coverage of the Project Area plus a 500-foot buffer. Additionally, a 1,640-foot buffer will be surveyed specifically for burrowing owl burrows, in accordance with Recommended Non-Disturbance Buffers for Occupied Burrowing Owl Nesting Sites Based on Project Activity Impact Level (CDFW, 2012). All direct and indirect observations of special-status biological resources will be recorded using a handheld GPS and on field forms. Habitat will be evaluated by the Qualified Biologist to determine the potential for biological resource monitoring and/or surveys for species that are seasonal or require focused surveys during specified periods (e.g., special-status plants, blunt-nosed leopard lizard).

The pre-disturbance biological survey report will include a map of the proposed Project construction boundary, biological survey area, special-status species observations (when observed), areas of potential and/or occupied habitat (if any), areas identified for avoidance, and a list of all applicable mitigation measures that will be implemented for the respective project activity site.

MM-BIO-2 Monitoring A qualified biological monitor shall be on-site during all Project activities that have the potential to harm or impact special-status wildlife. Project activities that may require a biological monitor include but are not limited to vegetation removal and initial ground disturbance associated with well pad construction. When on-site, the biological monitor shall conduct a biological clearance survey of all work areas prior to the start of daily Project activities. The purpose of the clearance survey is to identify any biological resources (nests, dens, burrows) within the work areas that may have occurred since the last workday, any wildlife species within the work areas, and to inspect any exclusion areas and make sure they remain intact. In addition, the biological monitor shall monitor all vegetation removal and initial ground disturbance. Once activities that have the potential to harm or impact wildlife have been completed, daily biological monitoring will not be required. This determination will be left up to the discretion of the Qualified Biologist. The Qualified Biologist may conduct periodic inspections of Project activities to ensure measures are being implemented and no sensitive wildlife have moved into the area. Depending on the pre-disturbance biological survey, activities that will likely not require a biological monitor include drilling operations and Project operations. If at any time during Project activities any special-status wildlife species are observed within the Project Area, work around the animal's immediate area shall be stopped or work shall be redirected to an area within the Project Area that would not impact these species until the animal has left the area of its own volition. Listed species will not be handled or relocated and will be allowed to leave the Project Area unimpeded. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is injured or killed by Project-related activities, the biological monitor would stop work and notify Bidr and CalGEM and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area. The biological monitor will keep notes of all species observed, compliance concerns if any, and work activities conducted in a daily monitoring log.

MM-BIO-3 Bird Nest Survey Active bird nest(s) will be avoided by establishing a minimum 250-foot non-disturbance buffer for passerine species, a minimum 500-foot non-disturbance buffer for non-listed raptor nest(s), or a minimum 0.5-mile non-disturbance buffer around any federal or state- listed raptor nest(s) until the breeding season has ended. Non-disturbance buffers can be removed when a Qualified Biologist has determined that the birds have fledged, are no longer reliant on the nest or parental care for survival and adult birds are no longer occupying the nest, or the nest is no longer active (e.g., failed). Reduced non-disturbance buffers may be implemented if a Qualified Biologist concludes that work within the buffer area will not be likely to cause disturbance to or abandonment of the nest (e.g., when the disturbance area is

concealed from a nest site by topography, when work activities will have a limited duration within the buffer area, or when the species has been known to tolerate higher levels of disturbance). If reduced non-disturbance buffers are implemented, a Qualified Biologist will monitor the active nest(s) before and during construction to establish a baseline for nest behavior and determine whether construction activities are adversely affecting the nest. If a reduced non-disturbance buffer is implemented, full-time biological monitoring of the nest will occur during construction activities. The pre-disturbance monitoring of the nest site will occur on at least two occasions of at least one hour each during anticipated work hours prior to construction to establish a behavioral baseline. If behavioral changes are observed, the work causing that change will cease within the buffer area until the nest has fledged or is determined by the Qualified Biologist to no longer be active. The Qualified Biologist shall have the authority to halt or redirect construction activities to protect nesting birds from project activities. Any reduction of buffer areas for State or federal listed species during the nesting season must be authorized by CDFW and/or USFWS.

MM-BIO-4 WEAP A Worker Environmental Awareness Program (WEAP) will be presented to all personnel that may access the Project Area, prior to beginning work on the Project Area. The WEAP training will be given by trained personnel (e.g., Qualified Biologist or assigned Company Environmental Specialists). WEAP trainings will cover an overview of the laws and regulations governing the protection of biological resources; a description of protected (i.e., FESA/CESA threatened, endangered, candidate, and other special status) species known to occur or with the potential to occur in the Project Area. The training would include a discussion of the sensitive and protected species and their biology and general behavior, distribution and habitat needs, sensitivity to human activities, and Project-specific protective measures. It will also discuss species status and legal protections, define what is habitat and disturbance, and present biological resource protection measures. Materials will be provided to assist workers in recognizing protected and sensitive species. The training will include avoidance and minimization measures to protect biological resources, the identification of environmentally sensitive areas and avoidance buffers, and how to report biological resources if observed on site. The training of personnel would be documented using sign-in sheets.

MM-BIO-5 San Joaquin Kit Fox If the pre-disturbance biological survey identifies the presence of any Potential, Atypical, Known or Natal San Joaquin kit fox (SJKF) dens, the following measures will be implemented and documented in the pre-disturbance biological survey report.

1. Potential kit fox dens will be clearly identified on project maps, marked in the field, and a 50-foot no work buffer will be demarcated using stakes and flagging or similar materials to prevent inadvertent damage to the potential den. Alternatively, if a potential den cannot feasibly be avoided at such distance, the den may be monitored and blocked or excavated in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance (USFWS, 2011). All potential dens that will be destroyed by a Project activity or ground disturbance will

be fully excavated after monitoring conducted by a Qualified Biologist shows that it is not occupied by a listed or otherwise protected species.

2. If kit fox activity or sign is detected at any den including atypical dens (e.g., pipes, culverts), the den location will be identified as a "known" kit fox den in accordance with USFWS guidelines (USFWS, 2011). A minimum 100-foot no work buffer from any disturbance area will be maintained for known dens.

3. During pupping season (January 1 through August 31 or until pups are no longer dependent on adults), a minimum 500-foot no work buffer (distance at which construction noise attenuates to approximately 60 dBA) from any disturbance area will be maintained from occupied natal dens.

4. No excavation (or other project-related destruction) of a known or natal den will occur without prior written guidance from USFWS.

5. All pipes (greater than 3.5 inches in diameter) used during project activities would be capped. Stored pipes greater than 3.5 inches that cannot be visually inspected to verify that no wildlife is present will need to be monitored by a Qualified Biologist prior to use or movement. All trenches and excavations would be covered or ramped (1:1 slope) prior to prevent wildlife entrapment.

6. If take (as defined in FESA and/or CESA) of SJKF cannot be avoided, Bidr shall consult with USFWS and/or CDFW to obtain necessary authorization and shall implement all associated conditions, including any required take avoidance or minimization measures, of such authorization. If den exclusion or destruction is permitted under FESA, a Qualified Biologist will supervise any such activity.

MM-BIO-6 San Joaquin Antelope Squirrel If the pre-disturbance biological survey identifies burrows within the Project Area that are characteristic of or may be used by San Joaquin antelope squirrel (SJAS), the following avoidance methods for SJAS would be implemented:

1. Pre-activity surveys for SJAS will occur prior to the start of ground disturbance using 10-30 meter spacing.

2. SJAS surveys will be conducted when temperatures range from 50-90˚F. If sunny conditions are not present, surveys would not be conducted if temperatures are below 60 degrees Fahrenheit.

3. Surveyors will scan the survey areas with binoculars and listen for vocalizations. Visual and audible observations will be recorded and mapped.

4. All active SJAS burrows shall be clearly marked with flagging or staking, and ground-disturbing activities shall observe a minimum 50-foot no work buffer from each active burrow. Avoidance of burrows may be achieved by moving the planned well pad so that it is not within 50-feet of any SJAS burrows.

5. In areas where SJAS have been observed, suspected to occur, or observed within 50 feet, three days of SJAS surveys during the appropriate temperatures are recommended, prior to the start of ground disturbance activities.

6. Vegetation clearing will be completed after three days of no SJAS observations.

7. All holes, trenches, and other openings with a one-inch or greater in diameter must be covered during the day unless workers are in the immediate area working. If covering holes is not feasible while workers are taking required breaks, then the monitoring biologist will walk the area to discourage SJAS from entering the work area until workers return. All holes must be covered overnight.

MM-BIO-7 Blunt Nosed Leopard Lizard Blunt-nosed Leopard Lizard (BNLL) protocol-level surveys were conducted for the Project Area in 2023 and resulted in negative findings. The Project Area, including parking and staging for construction, was fenced using exclusion fencing to exclude BNLL from moving into the area. Since the Project Area is within known BNLL habitat, the following measures are recommended:

1. Project employees and contractors will receive formal training prior to working at the Project Area including attending a sensitive species education program developed by trained biologists, focusing on BNLL and any other sensitive species that may occur in the Project Area. At a minimum, the program will cover species distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and project mitigation measures. The training will also cover these avoidance recommendations:

2. Vehicles will observe a 10-mph speed limit within 2 miles of the nearest BNLL observation site. The speed limit will be imposed on all dirt and gravel roads leading to the Project Area to allow all Project personnel adequate reactionary time to stop their vehicle/equipment safely if a BNLL is observed on any of the access roads.

3. To prevent attracting wildlife to the Project Area, trash and food items will be kept in closed containers and removed daily. Trash and food items may attract BNLL predators, such as coyotes, foxes, and ravens. All trash and food items must be removed from the Project Area at the end of the workday and be kept in covered containers at all times.

4. A 360-degree inspection of all vehicles and equipment will be conducted prior to moving and operation to ensure that no BNLL or other wildlife is present beneath the tires, tracks, and/or undercarriage of vehicles/equipment. If a BNLL is observed beneath vehicles/equipment, the individual will be allowed to leave of its own accord and will not be harassed in any way.

5. Vehicles will use existing and/or designated roads and avoid any cross-country travel, outside of the exclusion fence. No vehicles or equipment may access overland routes until a Qualified Biologist has cleared the route for travel and has confirmed no burrows are present.

6. All open trenches, excavations, and/or holes more than 2 feet deep will be backfilled or covered at the end of each workday to prevent entrapment of BNLL or other wildlife.

If a hole is covered, it will be with appropriately sized plywood (or other similar cover types) with soil used to seal the edges. Any gaps or openings around the edge of the plywood must be sealed with soil or another material to deter BNLL and other wildlife from entering the excavation. If an excavation or hole is too large to cover, earthen escape ramps will be installed at an incline ratio of no greater than 2:1 at least every 300 feet. A Qualified Biologist would confirm that excavations are adequately ramped to allow animals to exit. All open trenches and excavations will be inspected for the presence of wildlife each workday. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals.

7. Spills of hazardous materials will be immediately cleaned up to prevent exposure to BNLL and other wildlife.

8. All observations or suspected observations of BNLL and/or other wildlife will be reported to the biological monitor immediately. If any BNLL and/or other wildlife are observed within the Project Area, all work activities that may harm or injure an individual will be halted immediately, until the animal leaves of its own accord. Under no circumstance will an animal be harassed or chased from the Project Area.

9. All burrows outside of the BNLL exclusion fence will be avoided. The BNLL exclusion fence is buried 6 inches underground and serves as a barrier between ground disturbing activities and burrows outside of the fence.

MM-BIO-8 Kangaroo Rat During the pre-disturbance biological survey, the Qualified Biologist will look for burrows that are characteristic of giant kangaroo rat. If any potential giant kangaroo rat burrows are observed, further measures will be taken to determine the presence of giant kangaroo rat within the Project Area. If giant kangaroo rat are determined to be present within the Project Area, CDFW and USFWS will be consulted to determine what additional measures would be necessary to prevent harm to this species.

MM-BIO-9 Burrowing Owl If the pre-disturbance biological survey identifies the presence of an occupied burrowing owl burrow, the following measures would be implemented and included in the pre-disturbance biological survey report:

1. Occupied burrowing owl burrows will not be disturbed during the burrowing owl nesting season (February 1 through August 31). The non-disturbance buffer distances shown in Table 4 below, in accordance with CDFW (2012), will be maintained between all disturbance areas and burrowing owl nesting sites. Well drilling is considered high disturbance.

Table 4. Recommended Non-Disturbance Buffers for Occupied Burrowing Owl Nesting Sites Based on Project Activity Impact Level (CDFW, 2012).

Time of Year	**Level of Disturbance**		
	Low	**Medium**	**High**

April 1 – Aug 15	656 feet	1,640 feet	1,640 feet
Aug 16 – Oct 15	656 feet	656 feet	1,640 feet
Oct 16 – Mar 31	164 feet	328 feet	1,640 feet

2. If occupied burrow avoidance is infeasible during the non-breeding season (between September 1 and January 31), a Qualified Biologist shall implement a passive relocation Project in accordance with the CDFW (2012) Staff Report on Burrowing Owl Mitigation, which may include installing one-way doors in burrow entrances for 48 hours to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and subsequently collapsing evicted burrows, once unoccupied, to prevent re-occupation. Prior to passive relocation or exclusion efforts, a burrowing owl management plan will be prepared and approved by CDFW. Destruction of burrows will occur only pursuant to a CDFW-approved burrowing owl management plan; burrow excavation will be conducted by hand whenever possible.

3. As an alternative to passive relocation, occupied burrows that are identified within 500 feet but outside the area of ground disturbance may be buffered with hay bales, fencing (e.g., sheltering in place), or as directed by the Qualified Biologist in coordination with CDFW, to avoid disturbance of burrows.

MM-BIO-10 American Badger If the pre-disturbance biological survey identifies the presence of an occupied American Badger burrow, the following measures would be implemented:

1. Occupied American badger dens (non-maternity dens) will be avoided by establishing a minimum 50-foot non- disturbance buffer.

2. Occupied maternity dens will be avoided by establishing a minimum 200-foot non-disturbance buffer during the pup-rearing season (February 15 through July 1).

3. A Qualified Biologist will establish (e.g., flag) non-disturbance buffer areas, as identified above, and will periodically monitor ground-disturbing activities to ensure no work is encroaching on established buffer areas.

4. Destruction of a maternity den burrow shall only proceed after the maternity den is no longer active and no badgers are present within the burrow.

MM-BIO-11Reptiles If the pre-disturbance biological survey identifies the presence of California glossy snake, San Joaquin coachwhip, western spadefoot, or any other reptile species of special concern within the Project Area, the following measures would be implemented:

1. If any California glossy snakes, San Joaquin coachwhips, or any other reptile species of special concern are observed during construction, the identified special-status reptiles will be allowed to move out of the work area on their own or will be removed from the work area and released in adjacent suitable habitat by the Qualified Biologist. The

Qualified Biologist will have all appropriate permits in place prior to handling any special-status reptiles or any other wildlife.

2. No monofilament plastic will be used, such as for erosion control.

3. All construction equipment and construction personnel vehicles will be checked prior to moving them, to ensure that no special-status reptile is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles will be left in place until the individual(s) moves out of harm's way on its own accord, as determined by a Qualified Biologist.

MM-BIO-12 Crotch's Bumblebee Crotch's bumblebee is a candidate for listing on the California Endangered Species Act (CESA), further surveys and measures may be recommended by CDFW or CalGEM. If bumblebee species that are or could be Crotch's bumblebee are observed at the Project Area during the pre-disturbance biological survey, CDFW will be contacted to determine what measures would be necessary to prevent harm.

MM-BIO-13 Best Management Practices The following best management practices (BMP) will be implemented during all construction, operations, and maintenance activities to avoid and minimize potential significant adverse impacts on biological resources:

1. All vehicles will observe a 20 mile-per-hour speed limit in all areas of disturbance and on unpaved roads unless otherwise posted. Off-road traffic outside designated access routes will be prohibited. Speed limit signs will be posted at visible locations at the point of site entry and at regular intervals on all unpaved access roads. A reduced speed limit of 10 miles-per-hour will be posted and observed within 0.25-mile of any reported BNLL observation. A 10-mile-per-hour speed limit will be observed at night.

2. All disturbance activities, except emergency situations or drilling that may require continuous operations, will occur only during daylight hours. Continuous 24-hour drilling activities will use directed lighting, shielding methods, or reduced lumen intensity. All new lighting fixtures for safety and security at facilities would be shielded, oriented downward, and on-demand lighting and/or with timers, to avoid unnecessary visual disturbance to wildlife.

3. All food-related trash items and microtrash, such as wrappers, cans, bottles, bottle tops, and food scraps will be disposed of in closed containers and routinely removed from the Project Area, at intervals of no less than once per week.

4. Excavations, spoils piles, unpaved access roadways, and parking and staging areas will be subject to dust control.

5. Herbicides application will be in accordance with existing laws and manufacturers' instructions (i.e., pesticide/herbicide labels). All herbicide chemicals used must be registered for use in the U.S. and California and must have a label certifying that the Federal Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR) have approved the herbicide for use. Herbicides will not be

sprayed within 50 feet of known occurrences of any other special-status plant occurrence or federal land. No rodenticides will be used on any project.

6. All open trenches, excavations, and/or holes more than 2 feet deep will be backfilled or covered at the end of each workday to prevent wildlife entrapment. If an excavation or hole is too large to cover, escape ramps will be installed at an incline ratio of no greater than 2:1 at least every 300 feet. All trenches and excavations will be inspected for the presence of wildlife each day prior to the start of work. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals.

7. All straight construction pipes, culverts, or similar structures with a diameter of 3.5-inches or greater that are stored at a construction site overnight will be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. All bent pipe with a diameter of 3.5-inches or greater that cannot be visually inspected for wildlife with 100 percent certainty will be left in place and monitored by a Qualified Biologist using wildlife cameras and/or tracking material prior to being removed, capped, moved, or buried. If any wildlife is discovered inside a pipe, that section of pipe is not to be moved until the animal vacates the pipe on its own accord.

8. To enable SJKF and other wildlife to pass through the Project Area, any new perimeter fencing installed around project work areas, with the exception of where fencing is required to exclude wildlife from known hazards, will include a 4 to 6-inch opening between the fence and the ground or the fence will be raised 4 to 6 inches above the ground. The bottom of the fence fabric will be knuckled (wrapped back to form a smooth edge), if necessary, to protect wildlife from injury when passing underneath. The perimeter fencing would be installed outside of the BNLL exclusion fence. The BNLL exclusion fence is made to exclude reptiles and amphibians and will not keep SJKF from passing through.

9. All vertical tubes used in project construction and chain link fencing poles will be capped to avoid entrapment and death of special-status wildlife and birds.

10. Discovery of State or federally listed species that are injured or dead will be reported immediately via telephone and within 24 hours in writing to CDFW and USFWS as relevant. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information, such as the cause of injury or death (if known).

11. All activity will use previously disturbed areas to the maximum extent feasible to minimize the amount of new disturbance in areas with existing natural lands.

12. Vehicle, equipment, and material storage will be limited to previously disturbed areas or predefined storage/laydown areas that are incorporated into work site limits. All concrete and asphalt debris will be removed from the Project Area to either a designated concrete or asphalt storage facility, or off site for recycling or proper disposal on completion of construction.

13. No vehicles or construction equipment will be parked within a water of the State, including any dry wash or drainage, nor shall vehicles or construction equipment cross, or travel within a water of the State, including any wash or drainage, where and when water is flowing. No materials will be stored within a Water of the State.

14. All construction equipment and construction personnel vehicles will be checked underneath prior to moving them, to ensure that no wildlife is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles will be left in place until the wildlife moves out of harm's way on its own accord, as determined by a Qualified Biologist.

15. All tracked vehicles and other construction equipment entering the Project Area from outside of Kern County will be washed or maintained to be weed-free.

16. All washing of trucks, paint, equipment, or similar activities including concrete washout will occur in designated areas/facilities where runoff is fully contained for collection prior to off-site disposal. Wash water may not be discharged from the Project Area, must be stored in a manner that excludes sensitive wildlife species, and located at least 100 feet from any water of the State.

b) The Project Area contains disturbed habitat with non-native grassland species. The review of the National Wetlands Inventory identified an intermittent stream (Carneros Creek) near the Project Area and two unnamed intermittent streams that lie across the existing road that will be used to access the Project Area. No Project activities are planned within any aquatic features. To ensure there is no disturbance or impact to any of the above-mentioned aquatic features, **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HYDRO-1** will be implemented for the duration of the Project. Therefore, there would be ***no impact*** to sensitive natural communities, and impacts to riparian areas would be ***less than significant with mitigation***.

c) The biological survey conducted in 2023 confirmed that there are no wetlands present within or near the Project Area. Therefore, there would be ***no impact*** to wetlands.

d) The Project Area is currently enclosed by a fence used to exclude BNLL from entering. The fenced area encompasses approximately 2.1 acres of grassland habitat. The linear dimensions of the fenced area are approximately 500 feet x 255 feet x 450 feet x 150 feet. This is a very small area compared to the surrounding landscape of habitat. An excluded area of that size should not impede wildlife from moving around it. The fenced area may provide a minimal obstacle to wildlife movement. Therefore, the impact on wildlife movement would be ***less than significant***.

e) Based on the biological reconnaissance surveys, there are no trees that would need to be removed on the Project Area. Therefore, the Project would not conflict with any local ordinances, and there would be ***no impact***.

f) The Project Area is not located within the boundaries of a HCP. The Project would not conflict with an adopted HCP, NCCP, or other approved local, regional, or state HCP, and there would be ***no impact***.

3.5 Cultural Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Environmental Setting and Baseline

An archaeological and historic property record search of the Area of Potential Effect (APE), or Project Area, and a 0.25-mile radius was conducted at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System (SSJVIC-CHRIS) at the California State University, Bakersfield on June 26, 2023. The records search did not reveal any previously recorded resources within the Project Area or 0.25-mile search radius.

On June 29, 2023, Padre Associates conducted a Phase I archaeology study. The study included a records search of the Project Area plus 0.25-mile radius and a pedestrian survey of the entire Project Area. The records search did not reveal any previously recorded resources. No cultural resources were observed during the pedestrian survey (Padre Associates 2023b; Appendix C).

Environmental Assessment

a) Cultural resource surveys conducted within the Project Area (Appendix C) concluded that there were no identified cultural resources within the boundaries. Therefore, the Project would have ***no impact*** on historical resources.

b) No archaeological resources were identified within the Project Area during the records search or pedestrian survey (Appendix C). Therefore, impacts to archaeological resources are expected to be less than significant. However, in the unlikely event of an inadvertent discovery, implementation of **MM-CUL-1/TCR-1** would ensure impacts are minimized to the extent feasible**.** Therefore, impacts to archaeological resources would be ***less than significant with mitigation.***

MM-CUL-1/TCR-1 Discovery of Previously Unknown Cultural or Tribal Cultural Resources In the event any potential tribal cultural resources, archaeological resources/materials,

other cultural resources, or articulated or disarticulated human remains are discovered during ground disturbance or construction activities, Bidr shall cease any ground disturbing and construction activities within 50 feet of the find, or an agreed upon distance based on the Project Area and nature of the find. Work stoppage shall remain in place until the qualified archaeologist, or other designated on-stie specialist, determines the nature of the discovery, and evaluates the significance of the discovery and recommends appropriate treatment measures. Per CEQA Guidelines Section 15126.4(b)(3), Project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. If it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with CalGEM, which may include data recovery or other appropriate measures. CalGEM will consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. Tribal cultural resources shall not be photographed nor be subjected to any studies beyond such inspection as may be necessary to determine the nature and significance of the discovery. If the discovery is confirmed as potentially significant or a tribal cultural resource, an Environmentally Sensitive Area (ESA) will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities will be permitted within the ESA until the area has been cleared for construction. The exact location of the resources within the ESA must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. If after consultation it is deemed appropriate, archaeological materials recovered during any investigation shall be curated at an accredited curation facility. The qualified archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to CalGEM and the Southern San Joaquin Valley Information Center.

c) No human remains have been identified within the Project Area; therefore, no impacts are anticipated to occur. However, in the unlikely event of an inadvertent discovery, implementation of the cultural resources' procedures described in **MM-CUL-2/TCR-2** would ensure that impacts would be ***less than significant with mitigation***.

MM-CUL-2/TCR-2 Unanticipated Discovery of Human Remains If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash or other remnants of burning ceremonies) are uncovered during Project construction, Bidr shall immediately halt all ground disturbing work within 50 feet of the discovery or other agreed upon distance based on the Project Area and nature of the find; treat the remains with respect and dignity; contact the Kern County Coroner within 24 hours to evaluate the remains; and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1), California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.8. The Kern County Planning and Natural Resources Department shall be notified concurrently. If the County Coroner determines the remains to be of Native American origin, the County Coroner shall contact the Native

American Heritage Commission within 24 hours of this determination, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill (AB) 2641). The Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendant regarding their recommendations, if applicable, taking into account the possibility of multiple humans remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply.

Unless otherwise required by law, the stie of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act (Cal. Govt. Code § 6250 et seq.).

3.6 Energy

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

Environmental Setting and Baseline

Energy capacity, or electrical power, is generally measured in watts while energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 watts, the energy required to keep the bulb on for 1 hour would be 100 watt-hours. If ten 100-watt bulbs were on for 1 hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts, which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

Power for the construction phase of the proposed Project would be generated at the Project Area using diesel-powered electrical generators.

Environmental Assessment

a) Construction activities associated with the Project are estimated to take 56 total days to complete for grading, rig setup, well drilling, rig decommission and facility construction. Construction of the proposed Project would require the use of fuels (primarily gasoline and diesel) for the operation of construction equipment and vehicles to perform a variety of activities, including excavation, hauling, well installation, and vehicle travel (including on-site and commuter trips). Table 3.6-1 provides an estimate of construction fuel consumption for the proposed Project based on information provided by the CalEEMod 2022.1 air quality computer model.

Table 3.6-1 Estimated Construction Fuel Consumption

Phase	Equipment	Quantity	Total No. Hours Operated	Horsepower	Load Factor	Fuel Consumption Rate (gallons per hour)	Total Fuel Consumption (gallons)
Site Preparation and Grading	Dozer	1	100	150	0.4	2.4	240.00
	Grader	1	100	224	0.41	3.6736	367.36
	Excavator	1	100	248	0.37	3.6704	367.04
	Drill Rig	1	20	185	0.5	3.7	74.00
	Pump	1	40	84	0.74	2.4864	99.46
	Loader	1	100	164	0.37	2.4272	242.72
						Phase Total Fuel Consumption (gallons)	1,390.58
Phase	**Equipment**	**Quantity**	**Total No. Hours Operated**	**Horsepower**	**Load Factor**	**Fuel Consumption Rate (gallons per hour)**	**Total Fuel Consumption (gallons)**
Rig Setup	Forklift	1	30	150	0.2	1.2	36.00
	Crane	1	30	231	0.29	2.6796	80.39
	Welder	1	30	46	0.45	0.828	24.84
						Phase Total Fuel Consumption (gallons)	141.23

Phase	Equipment	Quantity	Total No. Hours Operated	Horsepower	Load Factor	Fuel Consumption Rate (gallons per hour)	Total Fuel Consumption (gallons)
Well Drilling	Drill Rig	1	432	650	0.5	13	5,616.00
	Mudpump	2	864	1000	0.74	59.2	25,574.40
	Genset, Rig Power	2	864	400	0.74	23.68	10,229.76
	Genset, Instruments	1	432	127	0.74	3.7592	1,623.97
	Forklift	1	144	150	0.2	1.2	172.80
	Genset, Auxiliary	3	1,296	60	0.74	5.328	2,301.70
	4000w Light Tower	3	648	15	0.42	0.756	163.30
	8000w Light Tower	3	648	30	0.42	1.512	326.59
	Backhoe	1	216	97	0.37	1.4356	620.18
	Welder	2	864	46	0.45	0.828	715.39
	Phase Total Fuel Consumption (gallons)						47,344.09

Phase	Equipment	Quantity	Total No. Hours Operated	Horsepower	Load Factor	Fuel Consumption Rate (gallons per hour)	Total Fuel Consumption (gallons)
Well Decommission	Forklift	1	30	150	0.2	1.2	36.00
	Crane	1	30	231	0.29	2.6796	80.39
	Welder	2	60	46	0.45	0.828	49.68
	Phase Total Fuel Consumption (gallons)						166.07

Phase	Equipment	Quantity	Total No. Hours Operated	Horsepower	Load Factor	Fuel Consumption Rate (gallons per hour)	Total Fuel Consumption (gallons)
Tank Facility Construction	Crane	1	80	231	0.29	2.6796	214.37
	Forklift	2	240	89	0.2	0.712	170.88
	Backhoe	2	320	97	0.37	1.4356	459.39
	Welder	2	320	46	0.45	0.828	264.96
						Phase Total Fuel Consumption (gallons)	1,109.60
						Project Total Fuel Consumption (gallons)	50,151.6

Source: Refer to Appendix A for CalEEMod assumptions used in this analysis.

Notes:

1 Derived using the following equation: Fuel Consumption Rate = Horsepower x Load Factor x Fuel Consumption Factor. Where: Fuel Consumption Factor for diesel engines is 0.04 gallons per horsepower per hour (gal/hp/hr). Total Fuel Consumption calculated using the following equation: Total Fuel Consumption = Number of Equipment Units x Duration in Hours x Fuel Consumption Rate.

Project construction would occur over five phases, with the drilling phase utilizing the most construction equipment. As shown in Table 3.6-1, the construction of the proposed Project would result in total consumption of approximately 50,152 gallons of diesel fuel. In addition to direct construction energy consumption, indirect energy use would be required to make the materials and components used in construction. This includes energy used for extraction of raw materials, manufacturing, and transportation associated with manufacturing.

The total diesel and gasoline fuel sales in Kern County was estimated by the California Energy Commission to be 543 million gallons in 2021 (California Energy Commission 2023). Accordingly, the estimated 50,152 gallons of diesel fuel required for Project construction activities would represent approximately 0.01 percent of total diesel and gasoline fuel sales in Kern County. As such, fuel energy consumed during Project construction would be temporary and would not represent a substantial demand on energy resources.

In addition, energy conservation would occur during Project construction through implementation of **RR-EN-1**, compliance with the CARB anti-idling and emissions regulations specified in Title 13, Section 2485, of the C.C.R, which require that equipment not used for more than five minutes be turned off. Compliance with these regulations would result in less fuel combustion and energy consumption and thus minimize the

Project's construction-related energy use. Project construction equipment would also be required to comply with EPA and CARB engine emission standards. (See **RR-GHG-5** and **RR-GHG-6**.) These emission standards require highly efficient combustion systems to maximize fuel efficiency and reduce unnecessary fuel consumption.

In addition, the Project includes several energy- and fuel-efficient design features (**DF-EN-1**) that would help minimize inefficient or wasteful use of energy and increase conservation during construction. For example, the proposed grading plan is designed to balance all earthwork on site, which would avoid truck trips that would have been required to haul-in fill materials to the site and haul-off of materials to be exported off-site. This would reduce fuel use, while also reducing temporary increases in noise and exhaust emissions. The grading plan and on-site construction equipment would also minimize impacts to the surrounding transportation network that would result from truck traffic associated with soil import/export and mobilization/demobilization. Further, with adherence to **RR-EN-2**, idling times on all diesel-fueled off-road vehicles over 25 horsepower will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes, with fleet operators being required to develop a written policy as required by C.C.R., Title 23, Section 2449 ("CARB Off-Road Diesel Regulations").

Implementation of **DF-EN-1**, **MM-EN-1**, and **RR-EN-1**, **RR-EN-2,** would further reduce fuel consumption and energy use.

Following construction, the potential Project operations energy use would consist of electricity at the well and production facility. Normal operational activities also include fuel use for vehicles, as follows:

- Normal operational activities at the well includes:
    - Two crew trucks daily
    - One vacuum truck daily
    - Well pump engine (25 HP)
    - Tank heater (4 MMBtu/Hr)

The well and tank heater will be operated by a field gas or commercial propane fueled engine. Annual fuel use will be no more than 17,799 MMBtu. There is no electricity required for operation of the proposed Project. Therefore, normal operations would not have any impact on the total electricity consumption in Kern County. Operation activities include daily operation of worker vacuum trucks that would consume an estimated 8,760 gallons of diesel fuel per year. As described above for construction equipment, compliance with the CARB anti-idling and emissions regulations that require that equipment not used for more than five minutes be turned off would result in energy conservation as would compliance with EPA and CARB engine emission standards that require highly efficient combustion systems to maximize fuel efficiency and reduce unnecessary fuel consumption.

With compliance with applicable regulations and implementation of **RR-EN-1**, **ENG-2**, **RR-EN-2**, and **MM-EN-1**, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the Project would result in ***less than significant impacts with mitigation***.

MM-EN-1 Energy Conservation

1. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

2. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available, and it is not feasible to use propane or natural gas.

b) The Project would occur adjacent to an active oil field and would not conflict with or obstruct any state or local renewable energy or energy efficiency plans. There is no electricity required for normal operations. State utilities are on target to achieve a net zero energy system by 2040, consistent with Assembly Bill (AB) 32, Senate Bill (SB) 32, and AB 1279. The Project would not conflict or obstruct utilities from achieving these targets. Therefore, impacts are considered ***less than significant***.

3.7 Geology and Soils

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource?	☐	☐	☒	☐
g) Directly or indirectly destroy a unique site or unique geologic feature?	☐	☐	☐	☒

Environmental Setting and Baseline

The Project Area is situated near the McDonald Anticline and the Carneros Creek Oil Fields, located in Kern County, California. This region is characterized by a semi-arid climate, with hot summers and mild winters. The terrain includes rolling hills and valleys, with the McDonald Anticline forming a prominent geological feature that influences local topography and drainage patterns. The McDonald Anticline and Carneros Creek Oil Fields are part of the larger San Joaquin Basin, which is known for its rich deposits of hydrocarbons. The geological formations in this area primarily consist of sedimentary rocks, including sandstone, shale, and siltstone. The anticline structure is significant for trapping oil and gas deposits.

The National Resources Conservation Service (NRCS, 2023) Web Soil Survey classifies the Project Area as being composed of Panoche Clay. Table 3.7-1 summarizes the key soil characteristics of the Project Area as classified by the NRCS.

Table 3.7-1 Key Soil Characteristics of the Project Area

Attribute	Description	Attribute	Description
Soil Classification	Panoche Clay (2 to 5 percent slopes)	Zone of Water Saturation within 72 Inches	None
Location	Alluvial fans, valleys	Organic Matter Content in Surface Horizon	About 0 percent
Parent Material	Alluvium derived from igneous and sedimentary rock	Ecological Site	R017XG043CA Loamy 6-8" P.Z.
Depth to Root Restrictive Layer	Greater than 60 inches	Non-Irrigated Land Capability Classification	7e
Natural Drainage Class	Well drained	Irrigated Land Capability Classification	2e
Water Movement in Most Restrictive Layer	Moderately high	Hydric Criteria	Does not meet
Available Water to 60 Inches	High	Calcium Carbonate Equivalent within 40 Inches	Typically, does not exceed 3 percent
Shrink-Swell Potential	Moderate	Saline Horizons within 30 Inches of Surface	None
Flooding	Not flooded	Reference	NRCS, 2023

State law to restrict development near active faults in California was established under the Alquist-Priolo Earthquake Fault Zoning Act (CDOC, 2022a). The Project Area is not within a fault zone; the San Andreas fault is located approximately 6 miles southwest of the Project Area and is the nearest fault zone to the Project Area (CDOC, 2022b). The proposed Project is not in a subsidence zone (USGS, 2023) and is not located in an area

with high landslide potential or a liquefaction zone (CDOC, 2022a). The Project Area is mapped as composed of moderately expansive soil (Kern County 2023).

Every geologic unit can be assigned a Potential Fossil Yield Classification (PFYC) class based on the probability and abundance of known vertebrate fossils and scientifically significant invertebrate and plant fossils. The PFYC scheme ranges from very low (PFYC 1) to very high (PFYC 5) depending on the potential fossil yield (BLM, 2016). The Project Area is underlain by nonmarine terrace deposits, which is assigned a PFYC Class 2 alluvial fan deposits.

Environmental Assessment

a) i) ii) The Project Area is not located within an Alquist-Priolo Earthquake fault zone (CDOC, 2022a). Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture and displacement almost always follows preexisting faults, which are zones of weakness, however not all earthquakes result in surface rupture (i.e., earthquakes that occur on blind thrusts do not result in surface fault rupture). Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. In addition to damage caused by ground shaking from an earthquake, fault rupture is damaging to buildings and other structures due to the differential displacement and deformation of the ground surface that occurs from the fault offset, leading to damage or collapse of structures across this zone.

While the closest fault to the Project Area is the active San Andreas fault, no known active or potentially active faults are mapped crossing or immediately adjacent to any project components. Therefore, there is little to no potential for primary fault rupture to impact the Project Area.

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between the Project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the Project Area. Earthquakes occurring on faults closest to the Project Area would most likely generate the largest ground motion. The intensity of earthquake induced ground motions can be described using peak site accelerations, represented as a fraction of the acceleration of gravity (g). The USGS National Seismic Hazards (NSH) Maps were used to estimate approximate peak ground accelerations (PGAs) in the proposed Project Area (USGS, 2014). The NSH Maps depict peak ground accelerations with a 2 percent probability of exceedance in 50 years, which corresponds to a return interval of 2,475 years and for a maximum considered earthquake. The estimated approximate peak ground acceleration from large earthquakes for the Project Area is approximately 0.8g, which corresponds to moderate to strong ground shaking.

Seismic ground-shaking could result in structural damage to Project infrastructure and facilities. However, the proposed Project does not involve any infrastructure or facilities that would include human occupancy. The risk of injury during the proposed Project associated with ground-shaking, landslides, or liquefaction are low. It is possible that

ground-shaking could substantially damage Project related infrastructure. The Project would be designed and constructed to conform with the most recently adopted building codes (**RR-GEO-1**) and Bidr would prepare and operate the proposed well in accordance with a Spill Prevention Control and Countermeasures (SPCC) Plan which will be prepared in accordance with CalGEM's requirements found in C.C.R., Title 14, Section 1722.9 and the Oil Pollution Prevention requirements of the Clean Water Act (40 CFR Part 112). (**MM-HAZ-2**.) In addition, BIDR will inspect all facilities in the event of an emergency and implement contingency measures for notification and clean-up in the event of a spill. (**MM-HAZ-2.**) Therefore, the Project would not exacerbate any existing risk from seismic hazards and impacts would be ***less than significant.***

iii, iv) In order to determine liquefaction susceptibility of a region, three major factors must be analyzed. These include the density and textural characteristics of the alluvial sediments, the intensity and duration of ground shaking, and the depth to groundwater.

The nonmarine terrace deposit found at the surface of the Project Area varies in thickness from 0 to less than 436 feet. below ground surface. The composition of the nonmarine terrace deposits as defined by drillers' logs in the area include clay, sand, gravel, and boulders. There are no reported water bearing sands within the nonmarine terrace deposits. Due to the lack of shallow groundwater depths, there is not potential that the project components would be subject to liquefaction-related phenomena in the event of a large regional earthquake.

The other form of seismically induced ground failure which may be caused by an earthquake is seismically induced landslides. Landslides triggered by earthquakes have been a significant cause of earthquake damage. Areas that are most susceptible to earthquake-induced landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. However, as the proposed Project components would be in flat to relatively flat topography and are not located immediately adjacent to steep slopes, earthquake induced slope instability is not likely to affect the proposed Project.

The Project Area is not located within a landslide or liquefaction zone and therefore, there is no potential for impacts to Project infrastructure and facilities related to landslides or liquefaction. Therefore, the Project would have ***no impact*** with regards to adverse effects related to landslides or liquefaction.

b) The general description and select physical characteristics of hazards of erosion and shrink/swell potential for soils were reviewed to evaluate potential hazards to the proposed Project related to unsuitable soil conditions. The general susceptibility of the soil associations underlying the proposed Project to sheet and rill erosion, wind erodibility, and shrink-swell potential is discussed below.

The NRCS Soil Survey Geographic (SSURGO) database for Kern County, California, Southeastern Part was reviewed to identify soil units and characteristics underlying the Proposed Project (NRCS, 2023). Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss

Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The Project Area is composed of Panoche Clay (2 to 5 percent slopes) with a K factor of 0.28. Clays act as a binder to soil particles, thus reducing the potential for erosion. A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The wind erodibility group for the Project Area is 6.

Soil erosion and loss of topsoil could occur due to surface disturbing activities including well pad grading and construction. Clays act as a binder to soil particles, thus reducing the potential for erosion. The Project Area is composed of Panoche Clay (2 to 5 percent slopes). Soils would be permanently compacted, which could lead to surface runoff and erosion during construction activity. Bidr would implement the erosion control measures described in **MM-HYDRO-1.** Therefore, potential erosion and topsoil loss impacts would be ***less than significant with mitigation***.

c) The Project Area is composed of very deep, well drained soils that are not unstable nor would the proposed Project cause them to become unstable. The Project Area is not located within a liquefaction or landslide zone. Therefore, the Project would result in ***less than significant impacts*** on soil stability, landslide, lateral spreading, subsidence, liquefaction, or collapse.

d) Linear extensibility is the method used by the NRCS to determine the shrink-swell potential of soils. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3 percent, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed in areas with expansive soils. The shrink-swell potential at the Project Area is moderate at 4.5 percent. While the Project Area is mapped as moderate, the Project does not involve construction of any buildings or structures for human occupancy. Therefore, the Project would not result in any direct or indirect risks to human life or property and ***no impacts*** would occur.

e) The Project would not involve the construction of any septic tank or other alternative wastewater disposal systems. Therefore, there would be ***no impact.***

f) The Project Area is underlain by nonmarine terrace deposits, which is assigned a PFYC Class 2 alluvial fan deposits. Class 2 is a Low PFYC, and geologic units are not likely to

contain paleontological resources. Units assigned to Class 2 typically have one or more of the following characteristics:

- Field surveys have verified that significant paleontological resources are not present or are very rare.
- Units are generally younger than 10,000 years before present.
- Recent aeolian deposits.
- Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely.

Except where paleontological resources are known or found to exist, management concerns for paleontological resources are generally low and further assessment is usually unnecessary except in occasional or isolated circumstances. Paleontological mitigation is only necessary where paleontological resources are known or found to exist. BIDR will implement monitoring, notification, and collection procedures to be followed in the event of inadvertent discovery of paleontological resources during ground-disturbing activities. In the event of an inadvertent discovery, all work at the site of discovery, and in any other locations where damage to the discovery could occur, shall cease until notification of a qualified archaeologist, or other designated on-stie specialist. Work may not begin again until the qualified archaeologist, or other designated on-stie specialist, confirms it is safe to do so. (See **MM-CUL-1/TCR-1**.)

As part of any WEAP training (**MM-HAZ-1**), all construction personnel shall be trained regarding the recognition and protection of possible buried paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. Training shall inform construction personnel of the procedures to be followed upon the discovery of paleontological materials. These procedures include notification of a paleontological monitor upon an accidental discovery and cessation of all work at the site of discovery until written approval to proceed is provided by the monitor. All personnel shall be instructed that unauthorized collection or disturbance of fossils and artifacts is unlawful. The probability of impacting significant paleontological resources is low (BLM, 2016), therefore, impacts to paleontological resources would be ***less than significant***.

g) There are no unique geologic features present at the Project Area; therefore, there would be ***no impacts*** to these resources.

3.8 Greenhouse Gas Emissions

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Setting and Baseline

Recent significant changes in global climate patterns have been associated with global warming, an average increase in the temperature of the atmosphere near Earth's surface. Global warming has been attributed to the accumulation of Greenhouse Gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities is responsible for contributing to global warming, disrupting ecosystems and making it harder for species to adapt resulting in unprecedented and irreversible levels of extinction and loss of biodiversity. The Intergovernmental Panel on Climate Change has reported that a rapid phase-out of fossil fuel use is essential to limit global warming and avoid the most catastrophic consequences of climate change.

The standard state definition of GHG includes six substances: CO_2; methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF_6) (CARB 2014). Tropospheric O_3 (a short-lived, not-well-mixed gas) and black carbon are also important climate pollutants. CO_2 is the most abundant GHG, and collectively CO_2, CH_4, and N_2O amount to 80 percent of GHG effects. Emissions of other GHGs other than CO_2 are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

Environmental Assessment

a) The Project would result in GHG emissions from diesel- and gasoline-powered construction equipment including drill and completion/workover rig engines, drill pad construction equipment, equipment trucks, water trucks, drill rig crew trucks/vehicles,

and portable lift equipment. Emissions could also occur through venting or fugitive losses from valves and fittings, pumps, compressors, and the wellhead.

Construction and operation GHG emissions were estimated using the SCAQMD's CalEEMod 2022.1 model (refer to Appendix A) based on assumptions detailed in Section 2, *Project Description*, including the Project's construction schedule and operation activities detailed in Section 2.4 and Section 2.5, respectively. Short-term construction emissions (e.g., off-road equipment, worker vehicle trips, grading, drilling, and installation of ancillary equipment) and annual operation emissions associated with the proposed Project were evaluated. Based on the results of this modeling, unmitigated construction emissions would result in a total of 488 metric tons of carbon dioxide equivalent ($MTCO_2e$). These emissions are amortized over the lifetime of the Project (30 years) with annual emissions estimated at 16.3 $MTCO_2e$ per year. For operational emissions, annual GHG emissions are estimated based on well servicing operations. Thus, operational emissions would result in an estimated 104 $MTCO_2e$ per year for the duration of the Project. Total Project GHG emissions for construction and operations are summarized in Table 3.8-1.

Table 3.8-1 Estimated Project Greenhouse Gas Emissions

Activity	GHG Emissions ($MTCO_2e$/year)
Construction (amortized over 30-year life of Project)	16.3
Operations	104
Total	**120.3**

The SJVAPCD does not have numeric thresholds for GHG emissions for CEQA. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include an "air quality attainment or maintenance plan and/or plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significance for GHG emissions if a project complies with regulatory programs to reduce GHG emissions.

In the absence of any adopted numeric threshold, the significance of the proposed Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. At the time of this writing, Kern County has not developed a Climate Action Plan. Therefore, for the purposes of this analysis, the Project

is evaluated against the CARB 2022 Scoping Plan update. Measures included in the Scoping Plan update would indirectly address GHG emission levels associated with construction activities, including the phasing-in of cleaner technology for diesel engine fleets (including construction equipment) and the development of a low-carbon fuel standard. Policies formulated under the mandate of AB 32, now followed by SB 32, that apply to construction-related activity either directly or indirectly, are assumed to be implemented Statewide and would affect the Project should those policies be implemented before construction begins. Specifically, implementation of AB 32 control measures for reduced vehicle emissions would decrease GHG emissions from the Project.

In addition, CARB approved additional regulations to reduce fugitive and vented emissions from new and existing oil and gas facilities, implementing Measure I-2 of the AB 32 Scoping Plan. The Oil Field Operator is required to comply with this regulation, thus reducing GHG emissions and being consistent with the AB 32 Scoping Plan, the Scoping Plan update, and the *Regulation Order Subarticle 13: Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities § 95665*. Specifically, this regulation covers GHG emissions, predominately methane, from production, gathering and boosting stations, and processing as well as natural gas storage and transmission compressor stations. It addresses both vented (intentional) and fugitive (unintentional) releases of GHGs by processes at facilities in the following sectors: (1) onshore and offshore crude oil or natural gas production; (2) crude oil, condensate and produced water separation and storage; (3) natural gas underground storage; (4) natural gas gathering and boosting stations; (5) natural gas processing plants; and (6) natural gas transmission compressor stations. This regulation establishes emission standards for active and idle equipment and components at these facilities. Compliance with the Scoping Plan Measure I-2 requirements (**RR-GHG-1**) would ensure that the proposed Project would not conflict with AB 32 or SB 32.

Further, consistent with the requirements of the SJVAPCD Permits, Bidr is required to obtain an Authority to Construct Permit and Permits to Operate for any facility or equipment with the potential to emit air contaminants, as required pursuant to District Rule 2010. (**RR-AIR-2**.) All permitted equipment shall comply with District Rule 2201 (**RR-AIR-1**), which requires no net increase in emissions above specified thresholds from new and modified Stationary Sources of all nonattainment pollutants and their precursors. For oil field operations, permitted equipment used for crude oil and natural gas production and processing is subject to District Rule 4409 (*Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities*) (**RR-GHG-4**) and Federal New Source Performance Standards (**RR-GHG-5**), which ensure stringent Leak Detection and Repair requirements. SJVAPCD Rule 2260 (*Registration Requirements for Equipment Subject to California's Oil and Gas Regulation*) (**RR-GHG-3**) would ensure compliance with California's Oil and Gas Regulation (*Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities*, 17 C.C.R. § 95665 et seq.) and provides a registration mechanism that satisfies compliance requirements. Accordingly,

the proposed Project would not conflict with the Scoping Plan update or any other plans, policies, or regulations for the purpose of reducing GHG emissions.

Further, consumers of electricity and transportation fuels are, in effect, regulated by requiring providers and importers of electricity and fuel to participate in the GHG Cap-and-Trade Program and other Programs (e.g., low carbon fuel standard, renewable portfolio standard, etc.). Each such sector-wide program exists within the framework of AB 32 and its descendant laws, the purpose of which is to achieve GHG emissions reductions consistent with the AB 32 Scoping Plan. In summary, the Project would increase GHGs emissions from operations, electricity use, and combustion of gasoline/diesel fuels, each of which is regulated near the top of the supply-chain. With respect to GHGs from electricity, the AB 32 Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Pacific Gas and Electric (PG&E) Company is subject to the AB 32 Cap-and-Trade Program with all of their reported emissions covered under the program (CARB 2022). With respect to GHGs from use and combustion of gasoline/diesel fuels, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and the GHG emissions attributable to electricity use, virtually all of GHG emissions from CEQA projects associated with vehicle miles traveled (VMT) are covered under the Cap-and-Trade Program. Thus, Project GHG emissions will be consistent with the relevant plan (i.e., AB 32 Scoping Plan).

As to indirect GHG emissions impacts as a result of any oil sold during and as a result of Project implementation, in accordance with CEQA Guidelines section 15145, after a thorough investigation the California Department of Conservation has determined that such GHG impacts, while plausible, are too speculative for evaluation.

As such, GHG emissions associated with Project operations would be reduced to ***less than significant*** with coverage under the Cap-and-Trade Program (**RR-GHG-2**) and compliance with CARB requirements and the SJVAPCD Rules applicable to the Project (**RRs AIR-1, AIR-2, AIR-3, AIR-4, AIR-5, AIR-6, AIR-7, and AIR-8**).

b) As described above, California has enacted several pieces of legislation that relate to GHG emissions and climate change, which sets aggressive goals for GHG reductions within the State. The first and most far-reaching is AB 32, now followed by SB 32, in which CARB must ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. While AB 32 establishes control measures that would apply to light, medium, and heavy-duty vehicles, and the proposed Project would operate those types of vehicles, these measures are being implemented at the State level and the Project would not conflict with the implementation of AB 32 control measures for reduced vehicle emissions. These measures also serve to decrease on-road and off-road GHG emissions from the Project.

As also described above, CARB approved additional regulation to reduce fugitive and vented emissions from new and existing oil and gas facilities, implementing Measure I-2 of the AB 32 Scoping Plan. The Oil Field Operator is required to comply with this regulation, thus reducing GHG emissions and being consistent with the AB 32 Scoping Plan, the Scoping Plan update, and the *Regulation Order Subarticle 13: Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities § 95665*. Further, consistent with the requirements of the SJVAPCD Permits, Bidr would obtain an Authority to Construct Permit and Permits to Operate for any facility or equipment with the potential to emit air contaminants, as required pursuant to District Rule 2010. SJVAPCD Rule 2260 would ensure compliance with California's Oil and Gas Regulation (*Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities*, 17 C.C.R. § 95665 et seq.) (**RR-GHG-3**) and provides a registration mechanism that satisfies compliance requirements. Accordingly, the Project would be conducted in compliance with applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions and impacts would be ***less than significant***.

3.9 Hazards and Hazardous Materials

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

Environmental Setting and Baseline

The Project Area is adjacent to an active oil field. The proposed well would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC 2021, SWRCB 2023).

The Project Area is in a State Responsibility Area (SRA) for wildfire risk management. As described in Section 3.20, Kern County is a listed CAL FIRE Contract County which shifts initial fire response in SRAs to the county (CAL FIRE 2022). The currently adopted 2007 CAL

FIRE SRA Fire Hazard Severity Zone (FHSZ) map indicates the Project Area is in a high FHSZ. No very high fire hazard zones are within the Project vicinity (CAL FIRE 2007, CAL FIRE 2022).

The nearest school to the Project Area is Belridge Elementary, approximately 4.2 miles southeast.

Environmental Assessment

a, b) The Project does not involve the use or transport of significant amounts of hazardous materials. However, vehicles and equipment used for Project construction would contain or require the short-term use of small amounts of potentially hazardous materials including, but not limited to, fuels, lubricating oils, solvents, antifreeze, hydraulic fluid, and compressed gases. Portable generators often are used so diesel tanks could be used. Propane storage and transport may also be required for the heater. Other specialized chemicals that are potentially hazardous substances and could also be used include acids, bases, demulsifiers, and bactericides. These and other products may be stored at the well pad to support the drilling process.

The potential exists for an accidental release of hazardous materials during well pad preparation and development, drilling, and well completion or operations. Improper management or maintenance of hazardous materials containers, handling of hazardous materials (transfer between containers and equipment), storage, or disposal could result in leaks or larger releases which result in the contamination of soil. Construction activities also have the potential to result in exposure to these hazardous materials by workers, or by the public, if access to the construction site is not adequately controlled or if the materials are not properly handled and contained.

An analysis of well blowouts and consequences in the Inland District of CalGEM was published in 2009, which evaluated data from 1991 to 2005. The study found the following: 1) blowouts in the area are rare events – with an annual rate of 1 per 150,000 oil production wells, 2) the frequency of blowouts dramatically decreased over the study period even though there was not a similar decrease in well drilling or per well fluid handling in the same time period. Decrease was attributed to increased experience, improved safety culture, and improved technology, 3) there were no injuries to the public from any of the blowouts (Jordan and Benson 2009).

Bidr would comply with the AB 1960 implementing regulations and 40 CFR Part 112, which address SPCC Plan requirements; production facilities containment, maintenance, and testing; pipeline construction and maintenance; and maintenance and monitoring of production facilities, safety equipment, and other equipment.

In addition, Bidr would comply with CalGEM regulations found in C.C.R., Title 14, Division 2, Chapter 4, Section 1774.2, which requires a Pipeline Management Plan for all waste gas lines less than or equal to four inches in diameter and include a description of the testing method and schedule for all pipelines. (**RR-HAZ-1**.)

Adherence to regulations would limit the potential for exposure from routine use of hazardous materials during construction such that unhealthful levels of exposure by workers at a construction site, or to the general public located outside of Project construction areas, would not be expected.

Furthermore, adherence to these regulations would limit the potential for hazardous materials to be released to the environment due to routine use. While the routine use of hazardous materials related to Project construction would have a low likelihood of resulting in health or environmental consequences from exposure to a hazard by the public offsite or to construction workers onsite, implementation of **MM-HAZ-1** and **MM-HAZ-2** would further ensure safety of workers and the public. Therefore, any hazards to the public from routine use, transport or disposal of hazardous materials or their accidental release would be avoided or reduced to ***less than significant with mitigation.***

MM-HAZ-1 WEAP BMP Training Bidr's WEAP shall include all training requirements identified as Best Management Practices (BMPs) and include annual training for all field personnel (including employees, agents, and contractors). The WEAP shall include hazardous materials and hazardous waste management, and emergency preparedness, release reporting, and response requirements. The WEAP shall also include training regarding the recognition and protection of possible buried paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. Training shall inform construction personnel of the procedures to be followed upon the discovery of paleontological materials. These procedures include notification of a paleontological monitor upon an accidental discovery and cessation of all work at the site of discovery until written approval to proceed is provided by the monitor. All personnel shall be instructed that unauthorized collection or disturbance of fossils and artifacts is unlawful.

MM-HAZ-2 Spill Prevention Bidr shall develop, maintain, and implement a SPCC Plan in compliance with 14 C.C.R. § 1722.9 and the Oil Pollution Prevention requirements of the Clean Water Act (40 CFR Part 112), and that includes the following measures to prevent, repair, and remediate accidental leaks and spills from oil and gas operations:

1. Construction activities shall be conducted to allow for easy clean-up of spills. Construction crews shall have sufficient tools, supplies, and absorbent and barrier materials to contain and recover spilled materials.

2. Fuels and lubricants shall be stored only at designated staging areas, at least 100 feet away from the edge of water bodies. Fuel and lubricant tanks shall have appropriate secondary spill containment (e.g., curbs), and all refueling, and lubrication equipment shall be restricted to upland areas at least 100 feet away from stream channels and wetlands.

3. Any fuel truck shall carry an oil spill response kit and spill response equipment at all times.

4. All routine equipment maintenance shall be performed at the well pad, and promptly collect and lawfully dispose of wastes at an authorized recycling, treatment, or disposal facility.

5. A sufficient supply of sorbent and barrier materials shall be maintained on construction sites, and sorbent and barrier materials shall also be utilized to contain runoff from contaminated areas.

6. Shovels and drums shall be stored at the well pad or be readily available. If small quantities of soil become contaminated, hand tools such as shovels or other appropriate tools, shall be used to collect the soil and the material shall be stored in storage drums. Large quantities of contaminated soil may be bio-remediated on-site or at a designated remediation facility, subject to government approval, or collected utilizing heavy equipment, and stored in drums or other suitable containers prior to disposal. Should contamination occur adjacent to staging areas as a result of runoff, shovels and/or heavy equipment shall be utilized to collect the contaminated material. Contaminated soil shall be disposed of in accordance with state and federal regulations.

7. Above-ground tanks, valves and other equipment shall be visually inspected monthly and when the tank is refilled. Inspection records shall be maintained. Applicants shall periodically check tanks for leaks or spills.

8. Drain valves on all tanks shall be locked to prevent accidental or unauthorized discharges from the tank.

9. Equipment maintenance shall be conducted in staging areas or other suitable locations (i.e., maintenance shops or yards) to the extent practical.

10. Bidr shall notify the Kern County Environmental Health Division, Certified Union Program Agency (CUPA), surface landowner, and sensitive receptors located within 300 feet, of any hazardous materials/waste release immediately upon discovery, and to other applicable agencies as required by other laws. Bidr shall immediately contain the leak (e.g., by isolating or shutting down the leaking equipment), clean up contaminated media (e.g., soils), and repair the leak prior to recommencing operations. Bidr shall report the status and progress of the leak repair and remediation work to the County and the CUPA on monthly intervals or predetermined intervals until the repair has been completed. Contaminated media shall be analyzed according to 22 C.C.R. §§ 66261.21-66261.24 for determination of appropriate hazardous waste disposal. Hazardous Waste Determination procedures are provided in 22 C.C.R. § 66262.11.

11. If a release cannot be repaired or remediated within 48 hours, and has potential impact to sensitive receptors, Bidr shall incur costs to sample and analyze the potentially affected area, which may include soil, groundwater, outdoor or indoor air of sensitive receptors within 300 feet of the leak. Bidr shall pay all temporary relocation costs (e.g., housing, food, and transportation) for any exposed sensitive receptor until such time as the leak has been repaired and post-indoor air testing has been completed, as confirmed by identified agency having oversight of the remediation.

c) There are no existing or proposed schools within one-quarter mile of the Project Area: the nearest school is approximately 4.2 miles away. Therefore, there would be ***no impact*** related to hazardous materials in the vicinity of a school.

d) The Project Area is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and therefore would have ***no impact*** on the public or environment.

e) The Project Area is not located within an airport land use plan. The nearest active airport is the Elk Hills-Buttonwillow Airport, a county-owned public airport, located over 21 miles southeast of the Project Area. Therefore, the proposed Project would have ***no impact*** regarding safety hazards or excessive noise for people residing or working near an airport.

f) The Project Area is not located in an area with an adopted emergency response plan or emergency evacuation plan. Therefore, there would be ***no impact*** to emergency response or evacuation procedures in an adopted plan.

g) In the event of a wildfire, the proposed drill pad and well could be damaged. Further, increased human activity during construction could increase the risk for wildfire. However, Bidr would comply with all Kern County Fire Codes (**RR-HAZ-2**). Further Implementation of **MM-HAZ-3** and **MM-HAZ-4** would reduce the risk and impacts of wildfire. Therefore, impacts would be ***less than significant with mitigation***.

MM-HAZ-3 Fire Prevention Bidr shall implement the following measures:

1. Maintain firefighting apparatus and supplies required by the Kern County Fire Department.

2. Maintain a list of all relevant fire-fighting authorities for each work site.

3. Have available equipment to extinguish incipient fires and or construction of a fire break, such as: chemical fire extinguishers, shovels, axes, chain saws, etc.

4. Carry water or fire extinguishers and shovels in non-passenger vehicles in the field.

5. Have and maintain an adequate supply of fire extinguishers for welding, grinding, and brushing crews.

6. Protect individual safety to contain any fire that occurs and notify local emergency response personnel.

7. Remove any flammable wastes generated during oil and gas activities regularly.

8. Store all flammable materials used in oil and gas activities away from ignition sources and in approved containers.

9. Allow smoking only in designated smoking areas.

10. Prohibit smoking where flammable products are present and when the fire hazard is high. Train personnel regarding potential fire hazards and their prevention.

11. All internal combustion engines, stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order.

12. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition.

13. Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees.

14. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials.

15. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats.

MM-HAZ-4 Hot Work Equipment Although Bidr does not have a hot work program in place at the field, Bidr shall restrict the use of chainsaws, chippers, vegetation masticators, grinders, tractors, torches, and explosives at its locations, and ensure the sites where this equipment is used are equipped with portable or fixed fire extinguishers and/or a water tank, with hoses, fire rakes, and other tools to extinguish and or control incipient stage fires. The WEAP shall include fire prevention and response training for workers using these tools.

3.10 Hydrology and Water Quality

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

Environmental Setting and Baseline

The proposed Project is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The USFWS National Wetlands Mapper identifies Carneros Creek (classification code R4SBC) approximately 1,470 feet to the west of the Project Area based on infrared imagery from 1984 (USFWS 2023). This waterbody is an intermittent stream and is not present on the Project Area.

The nonmarine terrace deposit found at the surface of the Project Area varies in thickness from 0 to less than 436 feet. below ground surface. The composition of the nonmarine

terrace deposits as defined by drillers' logs in the area include clay, sand, gravel, and boulders. There are no reported water bearing sands within the nonmarine terrace deposits. The uppermost hydrocarbon bearing zone in the vicinity averages a depth of 1,993 feet below ground surface. The Sustainable Groundwater Management Act Data Viewer website, managed by the California Department of Water Resources (DWR), maps groundwater in Kern County and other areas. At the Project Area, there is no depth to groundwater and no groundwater is mapped because there is no known freshwater underlying the Project Area (DWR, 2023). The Sustainable Groundwater Management Act was passed in 2014, introducing a state requirement for the development of Groundwater Sustainability Agencies, requiring local jurisdictions to develop and implement a Groundwater Sustainability Plan that supports regional and state water conservation efforts (KGA, 2022). The Project Area is within the Department of Water Resources (DWR)-designated groundwater Kern County Subbasin, covered by the Kern Groundwater Authority (KGA) Groundwater Sustainability Plan. As the umbrella Groundwater Sustainability Agency in Kern County, the KGA covers approximately 1.3 million acres of the Subbasin and includes many smaller member agencies (KGA, 2022). The KGA Groundwater Sustainability Plan does not identify oil and gas operations as a significant factor affecting the Sustainable Groundwater Management Act objectives in the Subbasin.

Environmental Assessment

a) Construction activities could result in potential effects to the water quality of stormwater runoff through erosion and uncontained leaks or spills of hazardous materials. The Clean Water Act also established the National Pollutant Discharge Elimination System (NPDES) permit program, regulating point source discharges of pollutants into waters of the United States. Section 402 of the Clean Water Act provides that storm water discharges associated with industrial activity and construction must be authorized under a NPDES permit. Clearing, grading, and excavation projects that disturb more than one acre are required to obtain a NPDES storm water discharge permit under EPA regulations, though certain regulations such as 40 C.F.R. §122.26 (a)(2), (e)(8), and (c)(1)(iii) codify exemptions for oil and gas operations. Bidr will ensure that discharges of stormwater runoff during construction and operation activities are not contaminated by, or encounter, any overburden, raw material, intermediate products, finished product, byproduct or waste products; are only contaminated by or only encounter sediment; and pursuant to 40 C.F.R. §122.26(c)(1)(iii) that do not contribute to a violation of a water quality standard. (**RR-HYDRO-1**.)

In California, oil and gas operations may be required to obtain a storm water discharge permit (Construction General Permit Order 2009-0009-DWQ, as amended by 2010-00014-DWQ and 2012-0006-DWQ) under the requirements of the Clean Water Act and the C.F.R., and Bidr would obtain coverage under the Construction General Permit in advance of construction activity, if required. (**RR-HYDRO-2**.) Construction activities could result in potential effects to the water quality of stormwater runoff through erosion and uncontained leaks or spills of hazardous materials. Bidr would implement **RR-HYDRO-1**,

RR-HYDRO-2, **MM-HYDRO-1**, and **MM-HAZ-2** resulting in avoidance or reduction of impacts to ***less than significant impacts with mitigation*** to surface and groundwater quality.

MM-HYDRO-1 Stormwater BMPs Bidr shall implement BMPs during construction and operation activities. All selected practices shall be shown on a drainage implementation plan and self-certified as complete and feasible by a licensed professional qualified in drainage and flood control issues. The following BMPs shall be implemented and shown on the drainage plan:

1. Utilizing established facilities design, and construction or similar standards as applicable appropriate (e.g., ASTM, API).

2. Implementing good housekeeping and maintenance practices.

3. Preventing trash, waste materials and equipment from construction storm water;

4. Maintaining the wellhead, compressors, tanks and pipelines in good condition without leaks or spills.

5. Designing and maintaining a graded pad with berms to not actively erode and discharge sediment; and

6. Maintaining vehicles in good working order.

7. Implementing spill prevention and response measures:

8. Utilizing preventative operating practices such as tank level monitoring, safe chemical handling and conducting regular inspections.

9. Developing and maintaining a spill response plan.

10. Conducting spill response training for employees and have a process to ensure contractors have the necessary training.

11. Maintaining spill response equipment on site.

12. Implementing material storage and management practices.

13. Preventing unauthorized access.

14. Utilizing “run-on” and “run-off” control berms and swales around all pad areas; and

15. Stabilizing exposed slopes through vegetation and other standard slope stability methods.

b) Water used for drilling and dust suppression during construction would total approximately 30,000 bbl and would be obtained from the Belridge Water Storage District through a nearby operator. The water would be delivered by tanker truck generating approximately two vehicle trips per day. (**DF-HYDRO-1**.) Therefore, the necessary water for drilling would not result in any additional groundwater pumping. Further, the Project would involve construction of an earthen well pad (**DF-HYDRO-2**) and would not decrease the area for groundwater recharge. Therefore, the Project would

have a ***less than significant impact*** regarding groundwater management of the basin and groundwater supplies.

c) As discussed in response to question b, the proposed drill pad would be earthen in nature but graded prior to drilling. (**DF-HYDRO-2**.) Therefore, the proposed Project would not impede infiltration of stormwater through the addition of impervious surfaces. The Project does not involve the alteration of any natural drainages or streams, nor change the drainage pattern at the Project Area. Construction activity could result in potential effects to the water quality of stormwater runoff but would not increase the rate of stormwater runoff. With the implementation of **RR-HYDRO-1** the Project would result in ***no impacts*** with regard to increases in erosion, siltation, or the rate or amount of surface run-off or the capacity of existing or planned stormwater drainage systems.

d) The Project Area is not located in a flood hazard, tsunami, or seiche zone (Kern County 2004a) and would not impede or redirect any flood flows. The Federal Emergency Management Agency (FEMA) designates the boundaries of Flood Hazard Areas, or those areas anticipated to be inundated in the event of a 100-year storm event, on Flood Insurance Rate Maps (FIRMs). FIRMs for the Project Area indicate that the Project Area is located in areas designated as Zone X, or areas with a minimal flood hazard. The Zone X designation means that the area would have a moderate to low risk of inundation following a storm event and is protected by a levee or dam from 100-year flood events as well as 500-year storm events. Therefore, there would be ***no impact*** from the risk of pollutant release due to Project inundation.

e) As described in response to b) above, water for the proposed Project would be obtained from an irrigation canal and would not conflict with the KGA Groundwater Sustainability Plan. (**DF-HYDRO-1**.) Therefore, the proposed Project would not conflict with any sustainable groundwater management plans or water quality control plans, and there would be ***no impact***.

3.11 Land Use and Planning

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

Environmental Setting and Baseline

Figure 6 below displays the current land use of each parcel within the Project Area. The proposed well is located within an Exclusive Agricultural (A) zone; oil production is a permitted use for this zoning type (Kern County, 2022). As established above, the Project Area is entirely on land with an Oil and Gas Conformity Tier 2 rating (Kern County, 2023). The proposed well is within a Tier 2 Oil Conformity zone. The Kern County Zoning Ordinance designates Oil Conformity Tier 2 to "areas that are classified Exclusive Agriculture (A) or Limited Agriculture (A-1) Districts, have agriculture as the primary surface land use, and are not included in Tier 1." (Kern County, 2021).

Most of the site and surrounding area is bare earth, with dirt roads throughout the Project Area. The nearest residence and sensitive receptor to the Project Area is 7,700 feet south of the project. The Project Area is surrounded by oil field operations, primarily to the north and west.

Existing access to the property is in the northwestern corner of parcel 085-170-09.



Figure 6 - Designated Land Use on the Project Area and Surrounding Areas (created January 11, 2024)

Environmental Assessment

a) The proposed Project would be constructed and operated adjacent to an existing oil field and would not divide an established community. Therefore, ***no impacts*** to an established community would occur.

b) The Project would not conflict with any local, regional, or federal land use plan. Oil and gas extraction is a permitted land use within Exclusive Agricultural zoning. The Project would also conform with the Kern County General Plan Section 5.3.6, Environmental Impacts of Petroleum "to clearly identify and mitigate any adverse impacts on the environment from new or continued petroleum development by establishing clear and workable methods for industry compliance" by identifying and mitigating impacts of petroleum development, as described in this IS (Kern County, 2009). Therefore, there would be ***no impacts*** related to any land use plans, policies, or regulations.

3.12 Mineral Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐

Environmental Setting and Baseline

The Project Area is located adjacent to the administrative boundaries of the McDonald Anticline and Carneros Creek Oil Fields. There are no other aggregate resources, consisting of stone, sand, and gravel, identified within the Project Area.

Environmental Assessment

a), b) The Project would result in the production of a known mineral resource (e.g., petroleum) that is of value to the region and the residents of the State. Therefore, the Project would result in a ***less than significant impact*** related to mineral resources.

3.13 Noise

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

Environmental Setting and Baseline

There are no sensitive receptors within one mile of the Project Area. The nearest residential property to the proposed well is approximately 7,700 feet away. The Kern County General Plan applies an exterior noise level standard of 65 A-weighted decibels (dBA) Day-Night Average Level (L_{dn}/DNL) for noise levels in outdoor activity areas of residential and other noise sensitive uses (Kern County 2009). The L_{dn} represents the time-weighted energy average of decibels at equivalent sound level (dB, L_{eq}) for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 PM to 7:00 AM). In addition, when a Project activity is proposed in an area with an ambient noise level under 65 dBA, Kern County considers the noise impact of that activity to be significant if it will increase the ambient noise by more than 5 dBA. The adopted standard allows the property owner the use and enjoyment of their outdoor areas, such as the backyard of a single-family house or conducting church services. Chapter 8.36, Noise Control (Section 8.36.020, Prohibited Sounds) of the Kern County Zoning Ordinance prohibits the creation of construction noise between the hours of 9:00 PM and 6:00 AM on weekdays and between the hours of 9:00 PM and 8:00 AM on weekends, which is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site, if the construction site is within 1,000 feet of an occupied residential dwelling except for emergency work or when the Development Services Director or his designated representative provides an exemption for a limited time. A change in sound levels of 3

dBA is generally regarded as being barely perceptible to the human ear. Accordingly, an increase in sound levels less than 3 dBA at a distance of 150 feet from the construction site is assumed to comply with Chapter 8.36 of the Kern County Zoning Ordinance.

Environmental Assessment

a) Short-term construction noise impacts could result from land clearing and grading for the well pad and work areas; maintenance of access roads; construction of accessory facilities (including pipelines and electrical transmission lines); transporting the drilling rig, associated equipment, workers, and materials to the well pad site; well drilling; and construction equipment operations. As detailed in Section 2.4, work is anticipated to occur 5 days per week from 7:00 AM to 5:00 PM for preparation of the well pad and installation of associated ancillary facilities. Due to the complexity of drilling and the hazards associated with leaving a well unattended during the drilling process, drilling operations are typically conducted 24-hours per day. Drilling activities will be performed 7 days per week. Construction noise is usually made up of intermittent peaks and continuous lower levels of noise from equipment cycling through use. The types and numbers of construction equipment near any specific receptor location would vary over time. As summarized above, there are no sensitive receptors within one mile of the Project Area. Potential noise impacts were modeled using a 7,700-foot distance; assuming ambient noise levels of 50 dBA (7:00 AM to 10:00 PM) and nighttime noise of 40 dBA (10:00 PM to 7:00 AM) (consistent with rural environments [USEPA 1978]) corresponding to a Day-Night Average Sound Level (Ldn) of 50 dBA (i.e., equivalent sound level for a 24-hour period with an additional 10 dBA imposed on the equivalent sound levels for night time hours of 10:00 p.m. to 7 :00 a.m.); and the Federal Transit Authority's construction noise methodology (FTA 2006). Table 3.13-1 lists equipment expected to be used during each phase along with the typical expected equipment noise levels and usage factors adapted from the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006). The User's Guide provides the most recent comprehensive assessment of noise levels from construction equipment. Taking into account standard attenuation of noise with increased distance from a noise source (6 dBA/doubling of distance), the noise generated during well pad construction and drilling activities was propagated out to 7,700 feet to estimate the maximum noise levels resulting from the proposed Project as summarized in Tables 3.13-1 and 3.13-2.

Table 3.13-1 Construction Equipment Noise Levels in Project Area

Project Activity	Equipment	Quantity	Daytime Operating Hours	Nighttime Operating Hours	Acoustical Usage Factor (%)[1]	Typical Equipment L_{max} (dBA) at 50 feet from Source[1]	Calculated L_{eq} (dBA)	Calculated L_{dn} (dBA)
Grading	Dozer	1	11	0	40	81.7	33.9	
	Grader	1	11	0	40	83.4	35.7	
	Excavator	1	11	0	40	80.7	33.0	
	Loader	1	11	0	40	79.1	31.4	
	Drill	1	11	0	20	84.4	33.6	
	Pump	1	11	0	50	80.9	34.2	
						Noise at 7,700 feet	**41.6**	**38.2**
Rig Setup	Forklift	1	11	0	40	79.1	31.4	
	Crane	1	11	0	16	80.6	28.8	
	Welder	1	11	0	40	74.0	26.3	
						Noise at 7,700 feet	**34.1**	**30.7**
Well Drilling Operations	Drill	1	15	9	100	84.4	40.6	
	Pump	2	15	9	100	80.9	37.1	
	Generator	6	15	9	100	80.6	36.8	
	Light Tower	6	0	9	41	80.6	33.8	
	Forklift	1	15	9	40	79.1	31.4	
	Backhoe	1	15	9	40	77.6	29.8	
	Welder	2	15	9	40	74.0	26.3	
						Noise at 7,700 feet	**48.4**	**54.8**
Rig Decommission	Forklift	1	11	0	40	79.1	31.4	
	Crane	1	11	0	16	80.6	28.8	
	Welder	2	11	0	40	74.0	26.3	
						Noise at 7,700 feet	**34.7**	**31.3**

Project Activity	Equipment	Quantity	Daytime Operating Hours	Nighttime Operating Hours	Acoustical Usage Factor (%)[1]	Typical Equipment L_{max} (dBA) at 50 feet from Source[1]	Calculated L_{eq} (dBA)	Calculated L_{dn} (dBA)
Facility Construction	Crane	1	11	0	16	80.6	28.8	
	Forklift	2	11	0	40	79.1	31.4	
	Backhoe	2	11	0	40	77.6	29.8	
	Welder	2	11	0	40	74.0	26.3	
						Noise at 7,700 feet	**38.0**	**34.6**

Notes:

[1] Adapted from FHWA Roadway Construction Noise Model User's Guide (FHWA 2006)

Table 3.13-2 Operational Equipment Noise Levels in Project Area

Project Activity	Equipment	Quantity	Daytime Operating Hours	Nighttime Operating Hours	Acoustical Usage Factor (%)[1]	Typical Equipment L_{max} (dBA) at 50 feet from Source[1]	Calculated L_{eq} (dBA)	Calculated L_{dn} (dBA)
Normal Operations	Well Pump Engine	1	15	9	100	84.4	36.8	
						Noise at 7,700 feet	**36.8**	**43.2**
Well Workover	Pump	1	15	9	100	80.9	37.1	
	Drill Rig	1	15	9	100	84.4	40.6	
	Generator	1	15	9	100	80.6	36.8	
	Forklift	1	15	9	40	79.1	31.4	
	Backhoe	1	15	9	40	77.6	29.8	
	Welder	1	15	9	40	74.0	26.3	
	Crane	1	15	9	16	80.6	28.8	
						Noise at 7,700 feet	**44.0**	**50.4**

The Kern County General Plan applies an exterior noise level standard of 65 dB DNL for noise levels in outdoor activity areas of residential and other noise sensitive uses (Kern County 2004b). In addition, for commercial and industrial uses located within 500 feet of a residential property with ambient noise level under 65 dB L_{dn}, Kern County considers the noise impact of that project activity to be significant if it will increase the ambient noise by more than 5 dB (Kern County Zoning Ordinance §19.80.030(s)). The adopted standard

allows the property owner the use and enjoyment of their outdoor areas, such as the backyard of a single-family house or conducting church services. The Project's noise impacts as they relate to the installation of the new well is therefore evaluated against an absolute 65 dB L_{dn} standard. As shown in Tables 3.13-1 and 3.13-2, the Project would be in compliance with the Kern County General Plan noise level standard and during construction and operations would be below 55 dBA L_{dn} at 7,700 feet from any individual Project component. Thus, the proposed Project would not increase noise levels by more than 5 dBA and the proposed Project would comply with the Kern County General Plan noise level standard at the location of the nearest sensitive receptor. Therefore, impacts would be ***less than significant***.

b) Construction would result in temporary ground vibration. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Construction activities most likely to cause vibration include heavy construction equipment and drilling. Ground-borne vibration dissipates very rapidly with distance, reducing the typical construction-related vibrations to less than the threshold of 0.2 in/sec for typical non-engineered timber and masonry buildings at a distance greater than 10 feet from the source and to an imperceptible level at about 200 feet from the source (FTA 2006). There are no sensitive receptors within one mile of the nearest Project components; thus, receptors would not perceive vibration or ground-borne vibration during construction. Operation of the Project would not result in vibrations perceptible to nearby receptors. As such, impacts would be ***less than significant***.

c) The Project Area is located roughly 21 miles from the Elk Hills-Buttonwillow Airport. However, the proposed Project will not involve construction or expansion of the airport and would not result in the addition of sensitive receptors inside of the 65 dBA Community Noise Equivalent Level (CNEL) airport noise contour. Therefore, ***no impacts*** are anticipated due to the proximity to the airport.

3.14 Population and Housing

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

Environmental Setting and Baseline

The Project would occur adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields. The nearest incorporated city to the Project Area is Wasco, which has a current population of 30,800 (U.S. Census Bureau 2023).

Environmental Assessment

a) Site preparation and construction activities would involve the employment of up to 22 workers over a period of about two months. All workers are expected to come from the Kern County area. Once the construction is complete, no new workers would be required. Therefore, the Project would have ***no impact*** on population growth.

b) The Project would occur adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields and would not result in the displacement of any residences or people. As such, the Project would have ***no impact*** on housing or resident displacement.

3.15 Public Services

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: i) Fire protection?	☐	☒	☐	☐
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Environmental Setting and Baseline

The Project Area is currently served by the Kern County Sheriff's Department and Kern County Fire Department. There are no schools or parks within four miles of the Project Area (the nearest school, Belridge Elementary School, is approximately 4.2 miles from the Project Area).

Environmental Assessment

a) The Project would occur adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields, only incrementally increasing the amount of equipment and infrastructure in the area. The incremental increase in equipment would not require new or expanded fire protection or other safety efforts. The number of vehicles at the site would increase by approximately 10-15 during construction of the Project, and during Project operation the number of vehicles would decrease to 3 daily vehicle trips. No new permanent employees would be necessary for Project implementation, so the Project would not induce population growth in the area. Therefore, the Project would not put an increased burden on off-site public services, including police, school, and other governmental services. Implementation of **MM-HAZ-3** and **MM-HAZ-4** would ensure risks of wildfire are minimized and do not result in an increased burden on fire protection services. Therefore, impacts to public services would be ***less than significant with mitigation***.

3.16 Recreation

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION. Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting and Baseline

The proposed Project would be adjacent to the existing McDonald Anticline and Carneros Creek Oil Fields and would be similar in nature to the existing conditions in the area. There is no recreational development within the Project vicinity.

Environmental Assessment

a), b) The Project would not result in any new, permanent employees, and hence use of existing neighborhood and regional parks or recreational facilities would not increase because of Project implementation. Further, recreation would not be affected by noise or traffic associated with construction and operation of the Project. Thus, the Project would have no effect on demand for existing nearby parks or other recreational facilities. Therefore, there would be ***no impact*** to recreational facilities.

3.17 Transportation

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

Environmental Setting and Baseline

Regional access to the Project Area would be provided via State Highway 33, a two-lane highway that provides north-south travel along the eastern edge of the Temblor Mountain Range. State Highway 33 to Seventh Standard Road provides access to the Project Area; Seventh Standard Road runs east-west just outside of the Project area, and as such provides both the northern and southern access points to the Project Area.

Environmental Assessment

a) The Project would not involve any transportation improvements or programs that would conflict with adopted policies, plans, or programs supporting alternative transportation, such as the Kern County Regional Transportation Plan. The Project does not involve any roadway improvements or closures, or the development of any new driveways or access roads. Under the Kern County Oil and Gas Ordinance (not currently effective), oil wells must be setback at least 100 feet from major or secondary highways. The Project area is not located within 100 feet of any such roadways. As such ***no impact*** would occur.

b) During Project construction the maximum number of trips to the site will be 22 workers and 18 vendors during the drilling phase. All trips would originate from nearby areas in Kern County. Project equipment would remain onsite during construction. During operations, the Project would be staffed by current oilfield personnel. The State Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) states that projects that generate fewer than 110 automobile trips per day generally may be assumed to cause a less than significant transportation

network. As the Project would generate a maximum of 80 one-way trips per day, the Project would not cause a significant increase in vehicle miles traveled and impacts would be ***less than significant***.

c) The Project would not result in any changes to any roads, intersections, streets, highways, nor would it provide any incompatible uses to the street and highway system. All vehicles that would be used for travel to and from the Project would be licensed and comply with all appropriate transportation laws and regulations including obtaining and adhering to provisions of any required permits for oversized loads. As such, impacts related to transportation design hazards would be ***less than significant***.

d) The Project would occur adjacent to an existing developed oil field and would not result in any changes in ingress or egress to the site. Therefore, the Project would have ***no impact*** on emergency access.

3.18 Tribal Cultural Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Setting and Baseline

On June 15, 2023, Padre Associates submitted a Sacred Lands File search request to the Native American Heritage Commission (NAHC) seeking assistance with identifying California Native American Tribes that are traditionally and culturally affiliated with the Project Area. The results of the search indicated that there are no known tribal cultural resources listed or eligible for listing in the California Register of Historical Resources or a local register listing for the Project's APE (Padre Associated 2023b; Appendix C). On July 23, 2023, the NAHC provided Padre Associates with a list of 8 Tribes and 14 Tribal contacts, which Padres Associates then provided to CalGEM. The identified Tribes included:

- Kitanemuk & Yowlumne Tejon Indians
- Salinan Tribe of Monterey, San Luis Obispo Counties
- Santa Rosa Rancheria Tachi Yokut Tribe
- Santa Ynez Band of Chumash Indians
- Tejon Indian Tribe

- Tule River Indian Tribe
- Xolon-Salinan Tribe
- yak tityu tityu yak tiłhini – Northern Chumash Tribe

Subsequently, CalGEM became aware of the existence of additional Tribes affiliated with the Project Area that were not previously identified by the NAHC. To meet the requirements of Public Resources Code section 21080.3.1, CalGEM contacted the NAHC to obtain an updated list of Tribes and Tribal contacts.

On September 11, 2024, the NAHC provided a list of 23 Tribes and 35 Tribal contacts. The identified Tribes included:

- Barbareño/Ventureño Band of Mission Indians
- Chumash Council of Bakersfield
- Coastal Band of the Chumash Nation
- Dumna Wo-Wah Tribal Government
- Fernandeno Tataviam Band of Mission Indians
- Kern Valley Indian Community
- Kitanemuk & Yowlumne Tejon Indians
- Morongo Band of Mission Indians
- Northern Chumash Tribal Council
- Quechan Tribe of the Fort Yuma Reservation
- Salinan Tribe of Monterey, San Luis Obispo Counties
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Santa Rosa Rancheria Tachi Yokut Tribe
- Santa Ynez Band of Chumash Indians
- Serrano Nation of Mission Indians
- Table Mountain Rancheria
- Tejon Indian Tribe
- Traditional Choinumni Tribe
- Tubatulabals of Kern Valley
- Tule River Indian Tribe
- Xolon-Salinan Tribe
- yak tityu tityu yak tiłhini – Northern Chumash Tribe

On February 20, 2025, CalGEM provided consultation notification letters to all provided contacts. The letters provided a brief description of the Project, a map identifying the location of the Project Area, the lead agency's contact information, and a notification that requests for consultation would be accepted within sixty (60) days of receipt of the letter, in accordance with Public Resources Code Section 21080.3.1. On April 6, 2025, within the 60-day notification period, CalGEM followed up with all Tribal contacts concerning the consultation notification letters.

To date, no requests for consultation from the listed California Native American Tribes have been received as part of the CalGEM's tribal consultation efforts.

Environmental Assessment

a) i), ii) As a result of the above efforts, no known tribal cultural resources have been identified within the Project Area or vicinity.

Therefore, it is not expected that tribal cultural resources would be impacted during Project construction or operations. In the unlikely event of a tribal cultural resource discovery, BIDR would implement the following mitigation measures to reduce the potential to cause a substantial adverse change to a tribal cultural resource: **MM-CUL-1/TCR-1** and **MM-CUL-2/TCR-2**. Therefore, impacts to tribal cultural resources would be ***less than significant with mitigation***.

MM-CUL-1/TCR-1 Discovery of Previously Unknown Cultural or Tribal Cultural Resources In the event any potential tribal cultural resources, archaeological resources/materials, other cultural resources, or articulated or disarticulated human remains are discovered during ground disturbance or construction activities, Bidr shall cease any ground disturbing and construction activities within 50 feet of the find, or an agreed upon distance based on the Project Area and nature of the find. Work stoppage shall remain in place until the qualified archaeologist, or other designated on-site specialist, determines the nature of the discovery, and evaluates the significance of the discovery and recommends appropriate treatment measures. Per CEQA Guidelines Section 15126.4(b)(3), Project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. If it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The Planning and Community Development Department shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. Tribal cultural resources shall not be photographed nor be subjected to any studies beyond such inspection as may be necessary to determine the nature and significance of the discovery. If the discovery is confirmed as potentially significant or a tribal cultural resource, an Environmentally Sensitive Area (ESA) will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities will be permitted within the ESA until the area has been cleared for construction. The exact location of the resources within the

ESA must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. If after consultation it is deemed appropriate, archaeological materials recovered during any investigation shall be curated at an accredited curation facility. The qualified archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Southern San Joaquin Valley Information Center.

MM-CUL-2/TCR-2 Unanticipated Discovery of Human Remains If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash or other remnants of burning ceremonies) are uncovered during Project construction, Bidr shall immediately halt all ground disturbing work within 50 feet of the discovery or other agreed upon distance based on the Project Area and nature of the find; treat the remains with respect and dignity, contact the Kern County Coroner within 24 hours to evaluate the remains; and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1), California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. The Kern County Planning and Natural Resources Department shall be notified concurrently. If the County Coroner determines the remains to be of Native American origin, the County Coroner shall contact the Native American Heritage Commission within 24 hours of this determination, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill (AB) 2641). The Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendant regarding their recommendations, if applicable, taking into account the possibility of multiple humans remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply.

Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq.

3.19 Utilities and Service Systems

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

Environmental Setting and Baseline

Electrical services in the immediate area are provided by PG&E. PG&E obtains its energy supplies from power plants and natural gas fields in Northern California, as well as from energy purchased outside its service area and delivered through high-voltage transmission lines and pipelines. Power is generated from various sources, including fossil fuel, hydroelectric, nuclear, wind, and geothermal plants, and is fed into the electrical grid system. The well and tank heater will be operated by a field gas or commercial propane fueled engine. There is no electricity required for normal operations and, therefore, normal operations would not have any impact on the total electricity consumption in Kern County.

The Project Area is within the Department of Water Resources-designated groundwater Kern County Subbasin, covered by the Kern Groundwater Authority Groundwater

Sustainability Plan. The water necessary for the proposed Project would primarily be sourced from the Belridge Water District.

The nearest landfill is the Shafter-Wasco landfill, located approximately 24.5 miles east of the Project area.

Environmental Assessment

a) The Project would not require construction of or relocate new water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, in order to drill or operate the new well. Therefore, there would be ***no impact***.

b) Approximately 16,000 barrels of water would be required to drill the well. Operation of the well would not require any water, although a small amount of water would be used for dust control as part of normal oil field operations. The water necessary for the proposed Project would primarily be sourced from the Belridge Water District through a nearby operator. The Project would not require purchase of fresh water from a municipal provider or additional groundwater supplies beyond the water rights already held by the supplying operator. (See **DF-HYDRO-1**.) Therefore, the proposed Project would have sufficient water supplies during normal, dry, and multiple dry years, and ***less than significant*** impacts to water supply.

c) Some volumes of waste would be generated during the construction activity associated with drilling of the well. The waste material would be trucked offsite for disposal in an approved landfill. (**DF-UTL-1**.) Sufficient landfill capacity exists to handle the one-time disposal of the minimal amount of this material. No soil would be removed from the site and disposed of as a result of the construction of the proposed Project, and operation of the well would not generate any solid wastes. Therefore, any increase in solid municipal waste would be considered ***less than significant*** because: 1) it is a one-time increase, 2) it would not exceed the capacity of the servicing landfill, and 3) it would comply with all local, state, and federal regulations related to solid waste.

d), e) Soil cuttings and water generated during the well installation will be stored onsite pending waste profile analysis. (**DF-UTL-2**.) Soil will be stored in stockpiles placed on plastic sheeting and covered with plastic sheeting. Water will be stored in half bins. One water sample will be collected from each half bin at the completion of drilling and a representative composite soil sample will be collected from the soil cuttings for purposes of waste profiling. Following waste profiling, if the derived waste is found to be contaminated it will be properly disposed of in accordance with federal and state requirements at the appropriate off-site facility. Waste that is not contaminated may be spread on site. Therefore, the Project would not generate excess solid wastes and there would be ***no impact***. The Project would also comply with federal, state, and local management solid waste regulations. There would be ***less than significant*** impacts related to solid waste.

3.20 Wildfire

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

Environmental Setting and Baseline

Fire risk for the Project Area was determined using CAL FIRE FHSZ maps; areas are separated by SRA, Local Responsibility Area, and Federal Responsibility Areas. The risk from wildfire ranks from low to very high. The Project Area is located within an SRA (CAL FIRE 2007). Kern County is a listed CAL FIRE Contract County, which shifts the primary fire response in the SRA from CAL FIRE to the county in agreement (CAL FIRE 2022). Adopted in 2007, the CAL FIRE SRA FHSZ map for Kern County indicates the Project Area is within a moderate FHSZ (CAL FIRE 2007). Based on 2022 data from the CAL FIRE SRA FHSZ map for Kern County, the Project Area is within a high hazard zone, but this map has not yet been adopted by Kern County. The Project is not located within any very high FHSZs (CAL FIRE 2022).

Environmental Assessment

a, b, c, d) The Project Area is located within the SRA in an area zoned as high FHSZ. Implementation of **MM-HAZ-3** and **MM-HAZ-4** would ensure that the Project would not expose people or facilities to increased risk from wildfire. Therefore, impacts with regard to wildfire would be ***less than significant with mitigation***.

3.21 Mandatory Findings of Significance

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Environmental Assessment

a) As described in Section 3.4, Biological Resources, the Project Area does not contain designated critical habitat for any federal threatened or endangered species, although a number of special status species have been recorded in the USGS quadrangle in which the Project Area is located as well as the surrounding quadrangles. There are no riparian areas, wetlands, trees, or migratory wildlife corridors within the Project Area, and there are no adopted HCPs or NCCPs for the Project Area. CalGEM has determined that potential impacts of the Project to special status species would be less than significant with the incorporation of mitigation measures **(MM-BIO-1 through BIO-13)** and that there would be no impact to riparian areas, wetlands, trees, wildlife corridors or compliance with adopted HCPs or NCCPs. Therefore, the Project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the

number or restrict the range of a rare or endangered plant or animal. Further, as described in Section 3.5, cultural resource surveys conducted within the Project Area concluded that there were no identified cultural resources within its boundaries. Therefore, the Project would have no impact on historical resources. As described in Section 3.18, as a result of a Sacred Lands File search conducted by NAHC and tribal consultation efforts by CalGEM, no known tribal cultural resources have been identified within the Project Area. Any potential impacts to unknown resources would be reduced to less than significant with the implementation of mitigation measures (**MM-CUL-1/TCR-1** and **CUL-2/TCR-2**). Therefore, the Project would not eliminate important examples of major periods of California's history or pre-history, nor cause a substantial adverse change to a tribal cultural resource. Impacts are considered ***less than significant with mitigation***.

b) The Project would result in air emissions and GHG emissions that could be considerable when considered with all other cumulative emission sources in the San Joaquin Valley. However, as described in Section 3.3, Air Quality, CalGEM has determined that impacts of the Project on the applicable air quality plan and on cumulatively considerable pollutant increases would be less than significant as they are less than the thresholds and would follow SJVAPCD rules and regulations. With regards to GHG emissions, the Project emissions would be in compliance with the AB 32 Scoping Plan and the AB 32 Cap-and-Trade Program. Therefore, impacts would be ***less than significant***.

c) The Project is located adjacent to an active oil field and would be operated in accordance with all state and county laws and regulations to ensure that operations are protective of human health and the environment. In addition, implementation of all required mitigation measures would ensure that all impacts are less than significant. Project activities are consistent with the operation of an active oil field and would not directly or indirectly cause substantial adverse impacts to human beings. Impacts would be ***less than significant with mitigation***.

SECTION 4 MMRP

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
RR-AIR-1	Compliance with SJVAPCD Rule 2201 (New and Modified Stationary Source Rule)	--	--	SJVAPCD
RR-AIR-2	Compliance with SJVAPCD Rule 2010 (Authority to Construct and Permit to Operate)	--	--	SJVAPCD
RR-AIR-3	Compliance with SJVAPCD Rule 2280 (Portable Equipment Registration)	--	--	SJVAPCD
RR-AIR-4	Compliance with SJVAPCD Rule 4101(Visible Emissions)	--	--	SJVAPCD
RR-AIR-5	Compliance with SJVAPCD Rule 4623 (Storage of Organic Liquids)	--	--	SJVAPCD
RR-AIR-6	Compliance with SJVAPCD Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities)	--	--	SJVAPCD
RR-AIR-7	Compliance with SJVAPCD Rule 8031 (Bulk Materials)	--	--	SJVAPCD
RR-AIR-8	Compliance with leak detection and repair (LDAR) practices in accordance with SJVAPCD and CARB regulations	--	--	SJVAPCD
MM-BIO-1 Pre-Disturbance Survey	A pre-disturbance biological survey will be conducted by a Qualified Biologist. A Qualified Biologist is defined as a person with a combination of academic qualifications (minimum of 4 years of university or college education in biological sciences, zoology, wildlife biology, ecology, botany, or environmental science), professional field experience conducting biological surveys, and demonstrated knowledge and skills (i.e., field experience) related to the species and habitats present on the Project Area and the specific focused or protocol-level surveys conducted. The purpose of the pre-disturbance biological surveys is to confirm the potential presence and/or absence of any protected status species listed as threatened or endangered under the federal Endangered Species Act, threatened or endangered under the California	Prior to all construction activities. Survey reports, which will include avoidance and minimization measures as applicable.	Bidr must submit survey results to Kern County, USFWS and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	Endangered Species Act, or designated as fully-protected in the California Fish and Game Code, and to confirm the presence and/or absence of any non-protected status sensitive species considered under California Environmental Quality Act. The pre-disturbance biological survey will consist of walking belt transects to accomplish 100% coverage of the Project Area plus a 500-foot buffer. Additionally, a 1,640-foot buffer will be surveyed specifically for burrowing owl burrows, in accordance with Recommended Non-Disturbance Buffers for Occupied Burrowing Owl Nesting Sites Based on Project Activity Impact Level (CDFW, 2012). All direct and indirect observations of special-status biological resources will be recorded using a handheld GPS and on field forms. Habitat will be evaluated by the Qualified Biologist to determine the potential for biological resource monitoring and/or surveys for species that are seasonal or require focused surveys during specified periods (e.g., special-status plants, blunt-nosed leopard lizard). The pre-disturbance biological survey report will include a map of the proposed Project construction boundary, biological survey area, special-status species observations (when observed), areas of potential and/or occupied habitat (if any), areas identified for avoidance, and a list of all applicable mitigation measures that will be implemented for the respective project activity site.			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
MM-BIO-2 Monitoring	A qualified biological monitor shall be on-site during all Project activities that have the potential to harm or impact special-status wildlife. Project activities that may require a biological monitor include but are not limited to vegetation removal and initial ground disturbance associated with well pad construction. When on-site, the biological monitor shall conduct a biological clearance survey of all work areas prior to the start of daily Project activities. The purpose of the clearance survey is to identify any biological resources (nests, dens, burrows) within the work areas that may have occurred since the last workday, any wildlife species within the work areas, and to inspect any exclusion areas and make sure they remain intact. In addition, the biological monitor shall monitor all vegetation removal and initial ground disturbance. Once activities that have the potential to harm or impact wildlife have been completed, daily biological monitoring will not be required. This determination will be left up to the discretion of the Qualified Biologist. The Qualified Biologist may conduct periodic inspections of Project activities to ensure measures are being implemented and no sensitive wildlife have moved into the area. Depending on the pre-disturbance biological survey, activities that will likely not require a biological monitor include drilling operations and Project operations. If at any time during Project activities any special-status wildlife species are observed within the Project area, work around the animal's immediate area shall be stopped or work shall be redirected to an area within the Project Area that would not impact these species until the animal has left the area of its own volition. Listed species will not be handled or relocated and will be allowed to leave the Project Area unimpeded. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is	During all Project activities with the potential to harm or impact special status wildlife, and periodically as determined by the Qualified Biologist. On-site monitoring.	Bidr must submit monitoring reports to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	injured or killed by Project-related activities, the biological monitor would stop work and notify Bidr and CalGEM and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area. The biological monitor will keep notes of all species observed, compliance concerns if any, and work activities conducted in a daily monitoring log.			
MM-BIO-3 Active Bird Nests	Active bird nest(s) will be avoided by establishing a minimum 250-foot non-disturbance buffer for passerine species, a minimum 500-foot non-disturbance buffer for non-listed raptor nest(s), or a minimum 0.5-mile non-disturbance buffer around any federal or state- listed raptor nest(s) until the breeding season has ended. Non-disturbance buffers can be removed when a Qualified Biologist has determined that the birds have fledged, are no longer reliant on the nest or parental care for survival and adult birds are no longer occupying the nest, or the nest is no longer active (e.g., failed). Reduced non-disturbance buffers may be implemented if a Qualified Biologist concludes that work within the buffer area will not be likely to cause disturbance to or abandonment of the nest (e.g., when the disturbance area is concealed from a nest site by topography, when work activities will have a limited duration within the buffer area, or when the species has been known to tolerate higher levels of disturbance). If reduced non-disturbance buffers are implemented, a Qualified Biologist will monitor the active nest(s) before and during construction to establish a baseline for nest behavior and determine whether construction activities are adversely affecting the nest. If a reduced non-disturbance buffer is implemented, full-time biological monitoring of the nest will occur during construction activities. The pre-disturbance monitoring of the nest site will occur on at	Prior to and during all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	least two occasions of at least one hour each during anticipated work hours prior to construction to establish a behavioral baseline. If behavioral changes are observed, the work causing that change will cease within the buffer area until the nest has fledged or is determined by the Qualified Biologist to no longer be active. The Qualified Biologist shall have the authority to halt or redirect construction activities to protect nesting birds from project activities. Any reduction of buffer areas for State or federal listed species during the nesting season must be authorized by CDFW and/or USFWS.			
MM-BIO-4 WEAP	A Worker Environmental Awareness Program (WEAP) will be presented to all personnel that may access the Project Area, prior to beginning work on the Project Area. The WEAP training will be given by trained personnel (e.g., Qualified Biologist or assigned Company Environmental Specialists). WEAP trainings will cover an overview of the laws and regulations governing the protection of biological resources; a description of protected (i.e., FESA/CESA threatened, endangered, candidate, and other special status) species known to occur or with the potential to occur in the Project Area. The training would include a discussion of the sensitive and protected species and their biology and general behavior, distribution and habitat needs, sensitivity to human activities, and Project-specific protective measures. It will also discuss species status and legal protections, define what is habitat and disturbance, and present biological resource protection measures. Materials will be provided to assist workers in recognizing protected and sensitive species. The training will include avoidance and minimization measures to protect biological resources, the identification of environmentally sensitive areas and avoidance	Prior to all construction activities. WEAP training records.	Bidr must submit record of WEAP training to CalGEM.	CalGEM

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	buffers, and how to report biological resources if observed on site. The training of personnel would be documented using sign-in sheets.			
MM-BIO-5 San Joaquin Kit Fox	If the pre-disturbance biological survey identifies the presence of any Potential, Atypical, Known or Natal San Joaquin kit fox (SJKF) dens, the following measures will be implemented and documented in the pre-disturbance biological survey report. 1. Potential kit fox dens will be clearly identified on project maps, marked in the field, and a 50-foot no work buffer will be demarcated using stakes and flagging or similar materials to prevent inadvertent damage to the potential den. Alternatively, if a potential den cannot feasibly be avoided at such distance, the den may be monitored and blocked or excavated in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance (USFWS, 2011). All potential dens that will be destroyed by a Project activity or ground disturbance will be fully excavated after monitoring conducted by a Qualified Biologist shows that it is not occupied by a listed or otherwise protected species. 2. If kit fox activity or sign is detected at any den including atypical dens (e.g., pipes, culverts), the den location will be identified as a "known" kit fox den in accordance with USFWS guidelines (USFWS, 2011). A minimum 100-foot no work buffer from any disturbance area will be maintained for known dens. 3. During pupping season (January 1 through August 31 or until pups are no longer dependent on adults), a minimum 500-foot no work buffer (distance at which construction noise attenuates to approximately 60 dBA) from any disturbance area will be maintained from occupied natal dens.	Prior to all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	4. No excavation (or other project-related destruction) of a known or natal den will occur without prior written guidance from USFWS. 5. All pipes (greater than 3.5 inches in diameter) used during project activities would be capped. Stored pipes greater than 3.5 inches that cannot be visually inspected to verify that no wildlife is present will need to be monitored by a Qualified Biologist prior to use or movement. All trenches and excavations would be covered or ramped (1:1 slope) prior to prevent wildlife entrapment. 6. If take (as defined in FESA and/or CESA) of SJKF cannot be avoided, Bidr shall consult with USFWS and/or CDFW to obtain necessary authorization and shall implement all associated conditions, including any required take avoidance or minimization measures, of such authorization. If den exclusion or destruction is permitted under FESA, a Qualified Biologist will supervise any such activity.			
MM-BIO-6 San Joaquin Antelope Squirrel	If the pre-disturbance biological survey identifies burrows within the Project Area that are characteristic of or may be used by San Joaquin antelope squirrel (SJAS), the following avoidance methods for SJAS would be implemented: 1. Pre-activity surveys for SJAS will occur prior to the start of ground disturbance using 10-30 meter spacing. 2. SJAS surveys will be conducted when temperatures range from 50-90˚F. If sunny conditions are not present, surveys would not be conducted if temperatures are below 60 degrees Fahrenheit. 3. Surveyors will scan the survey areas with binoculars and listen for vocalizations. Visual and audible observations will be recorded and mapped.	Prior to all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	4. All active SJAS burrows shall be clearly marked with flagging or staking, and ground-disturbing activities shall observe a minimum 50-foot no work buffer from each active burrow. Avoidance of burrows may be achieved by moving the planned well pad so that it is not within 50-feet of any SJAS burrows. 5. In areas where SJAS have been observed, suspected to occur, or observed within 50 feet, three days of SJAS surveys during the appropriate temperatures are recommended, prior to the start of ground disturbance activities. 6. Vegetation clearing will be completed after three days of no SJAS observations. 7. All holes, trenches, and other openings with a one-inch or greater in diameter must be covered during the day unless workers are in the immediate area working. If covering holes is not feasible while workers are taking required breaks, then the monitoring biologist will walk the area to discourage SJAS from entering the work area until workers return. All holes must be covered overnight.			
MM-BIO-7 Blunt Nosed Leopard Lizard	Blunt-nosed Leopard Lizard (BNLL) protocol-level surveys were conducted for the Project Area in 2023 and resulted in negative findings. The Project Area, including parking and staging for construction, was fenced using exclusion fencing to exclude BNLL from moving into the area. Since the Project Area is within known BNLL habitat, Project employees and contractors must receive formal training prior to working at the Project Area including attending a sensitive species education program developed by trained biologists, focusing on BNLL and any other sensitive species that may occur in the Project Area. At a minimum, the program will cover species distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for	Prior to all construction activities, Project employees and contractors must attend a sensitive species education program developed by trained biologists. Avoidance measures must be implemented during all Project activities.	Bidr must submit its initial Compliance Monitoring Report to Kern County, USFWS, and CDFW within 30 days of Project implementation and annually thereafter.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	violation of state and federal laws, reporting requirements, and project mitigation measures. In addition to this training, the following avoidance measures will also be implemented: 1. Vehicles will observe a 10-mph speed limit within 2 miles of the nearest BNLL observation site. The speed limit will be imposed on all dirt and gravel roads leading to the Project Area to allow all project personnel adequate reactionary time to stop their vehicle/equipment safely if a BNLL is observed on any of the access roads. 2. To prevent attracting wildlife to the Project Area, trash and food items will be kept in closed containers and removed daily. Trash and food items may attract BNLL predators, such as coyotes, foxes, and ravens. All trash and food items must be removed from the Project Area at the end of the workday and be kept in covered containers at all times. 3. A 360-degree inspection of all vehicles and equipment will be conducted prior to moving and operation to ensure that no BNLL or other wildlife is present beneath the tires, tracks, and/or undercarriage of vehicles/equipment. If a BNLL is observed beneath vehicles/equipment, the individual will be allowed to leave of its own accord and will not be harassed in any way. 4. Vehicles will use existing and/or designated roads and avoid any cross-country travel, outside of the exclusion fence. No vehicles or equipment may access overland routes until a Qualified Biologist has cleared the route for travel and has confirmed no burrows are present. 5. All open trenches, excavations, and/or holes more than 2 feet deep will be backfilled or covered at the end of each workday to prevent entrapment of BNLL or other wildlife. If a hole is covered, it will be with			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	appropriately sized plywood (or other similar cover types) with soil used to seal the edges. Any gaps or openings around the edge of the plywood must be sealed with soil or another material to deter BNLL and other wildlife from entering the excavation. If an excavation or hole is too large to cover, earthen escape ramps will be installed at an incline ratio of no greater than 2:1 at least every 300 feet. A Qualified Biologist would confirm that excavations are adequately ramped to allow animals to exit. All open trenches and excavations will be inspected for the presence of wildlife each workday. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. 6. Spills of hazardous materials will be immediately cleaned up to prevent exposure to BNLL and other wildlife. 7. All observations or suspected observations of BNLL and/or other wildlife will be reported to the biological monitor immediately. If any BNLL and/or other wildlife are observed within the Project Area, all work activities that may harm or injure an individual will be halted immediately, until the animal leaves of its own accord. Under no circumstance will an animal be harassed or chased from the Project Area. 8. All burrows outside of the BNLL exclusion fence will be avoided. The BNLL exclusion fence is buried 6 inches underground and serves as a barrier between ground disturbing activities and burrows outside of the fence.			

<table>
<tr><th>Regulatory Requirement, Design Feature, and/or Mitigation Measure</th><th>Mitigation Description</th><th>Timing & Method of Verification</th><th>Reporting</th><th>Responsible Agency</th></tr>
<tr><td>MM-BIO-8
Kangaroo Rat</td><td>During the pre-disturbance biological survey, the Qualified Biologist will look for burrows that are characteristic of giant kangaroo rat. If any potential giant kangaroo rat burrows are observed, further measures will be taken to determine the presence of giant kangaroo rat within the Project Area. If giant kangaroo rat are determined to be present within the Project Area, CDFW and USFWS will be consulted to determine what additional measures would be necessary to prevent harm to this species.</td><td>Prior to all construction activities.

Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.</td><td>Bidr must submit survey results to Kern County, USFWS, and CDFW.</td><td>Kern County Planning and Natural Resources Department; USFWS; CDFW</td></tr>
<tr><td>MM-BIO-9
Burrowing Owl</td><td>If the pre-disturbance biological survey identifies the presence of an occupied burrowing owl burrow, the following measures would be implemented and included in the pre-disturbance biological survey report:

1. Occupied burrowing owl burrows will not be disturbed during the burrowing owl nesting season (February 1 through August 31). The non-disturbance buffer distances shown in Table 4 below, in accordance with CDFW (2012), will be maintained between all disturbance areas and burrowing owl nesting sites. Well drilling is considered high disturbance.

Table 4. Recommended Non-Disturbance Buffers for Occupied Burrowing Owl Nesting Sites Based on Project Activity Impact Level (CDFW, 2012).

<table><tr><th rowspan="2">Time of Year</th><th colspan="3">Level of Disturbance</th></tr><tr><td>Low</td><td>Medium</td><td>High</td></tr></table></td><td>Prior to all construction activities.

Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.</td><td>Bidr must submit survey results to Kern County, USFWS, and CDFW.</td><td>Kern County Planning and Natural Resources Department; USFWS; CDFW</td></tr>
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Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency

April 1 – Aug 15	656 feet	1,640 feet	1,640 feet
Aug 16 – Oct 15	656 feet	656 feet	1,640 feet
Oct 16 – Mar 31	164 feet	328 feet	1,640 feet

2. If occupied burrow avoidance is infeasible during the non-breeding season (between September 1 and January 31), a Qualified Biologist shall implement a passive relocation Project in accordance with the CDFW (2012) Staff Report on Burrowing Owl Mitigation, which may include installing one-way doors in burrow entrances for 48 hours to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and subsequently collapsing evicted burrows, once unoccupied, to prevent re-occupation. Prior to passive relocation or exclusion efforts, a burrowing owl management plan will be prepared and approved by CDFW. Destruction of burrows will occur only pursuant to a CDFW-approved burrowing owl management plan; burrow excavation will be conducted by hand whenever possible.
3. As an alternative to passive relocation, occupied burrows that are identified within 500 feet but outside the area of ground disturbance may be buffered with hay bales, fencing (e.g., sheltering in place), or as directed by the Qualified Biologist in coordination with CDFW, to avoid disturbance of burrows.

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
MM-BIO-10 American Badger	If the pre-disturbance biological survey identifies the presence of an occupied American Badger burrow, the following measures would be implemented: 1. Occupied American badger dens (non-maternity dens) will be avoided by establishing a minimum 50-foot non- disturbance buffer. 2. Occupied maternity dens will be avoided by establishing a minimum 200-foot non-disturbance buffer during the pup-rearing season (February 15 through July 1). 3. A Qualified Biologist will establish (e.g., flag) non-disturbance buffer areas, as identified above, and will periodically monitor ground-disturbing activities to ensure no work is encroaching on established buffer areas. 4. Destruction of a maternity den burrow shall only proceed after the maternity den is no longer active and no badgers are present within the burrow.	Prior to and during all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW
MM-BIO-11 Reptiles	If the pre-disturbance biological survey identifies the presence of California glossy snake, San Joaquin coachwhip, western spadefoot, or any other reptile species of special concern within the Project Area, the following measures would be implemented: 1. If any California glossy snakes, San Joaquin coachwhips, or any other reptile species of special concern are observed during construction, the identified special-status reptiles will be allowed to move out of the work area on their own or will be removed from the work area and released in adjacent suitable habitat by the Qualified Biologist. The Qualified Biologist will have all appropriate permits in place prior to handling any special-status reptiles or any other wildlife.	Prior to and during all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	2. No monofilament plastic will be used, such as for erosion control. 3. All construction equipment and construction personnel vehicles will be checked prior to moving them, to ensure that no special-status reptile is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles will be left in place until the individual(s) moves out of harm's way on its own accord, as determined by a Qualified Biologist.			
MM-BIO-12 Crotch's Bumblebee	Crotch's bumblebee is a candidate for listing on the California Endangered Species Act (CESA), further surveys and measures may be recommended by CDFW or CalGEM. If bumblebee species that are or could be Crotch's bumblebee are observed at the Project Area during the pre-disturbance biological survey, CDFW will be contacted to determine what measures would be necessary to prevent harm to this species.	Prior to all construction activities. Survey reports, which will include avoidance and minimization measures as applicable; on-site monitoring.	Bidr must submit survey results to Kern County, USFWS, and CDFW.	Kern County Planning and Natural Resources Department; USFWS; CDFW
MM-BIO-13 Best Management Practices	The following best management practices (BMP) will be implemented during all construction, operations, and maintenance activities to avoid and minimize potential significant adverse impacts on biological resources: 1. All vehicles will observe a 20 mile-per-hour speed limit in all areas of disturbance and on unpaved roads unless otherwise posted. Off-road traffic outside designated access routes will be prohibited. Speed limit signs will be posted at visible locations at the point of site entry and at regular intervals on all unpaved access roads. A reduced speed limit of 10 miles-per-	During all Project activities. Compliance Monitoring Report.	Bidr must submit its initial Compliance Monitoring Report to Kern County, USFWS, and CDFW within 30 days of Project implementation and annually thereafter.	Kern County Planning and Natural Resources Department; USFWS; CDFW

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	hour will be posted and observed within 0.25-mile of any reported BNLL observation. A 10-mile-per-hour speed limit will be observed at night. 2. All disturbance activities, except emergency situations or drilling that may require continuous operations, will occur only during daylight hours. Continuous 24-hour drilling activities will use directed lighting, shielding methods, or reduced lumen intensity. All new lighting fixtures for safety and security at facilities would be shielded, oriented downward, and on-demand lighting and/or with timers, to avoid unnecessary visual disturbance to wildlife. 3. All food-related trash items and microtrash, such as wrappers, cans, bottles, bottle tops, and food scraps will be disposed of in closed containers and routinely removed from the Project Area, at intervals of no less than once per week. 4. Excavations, spoils piles, unpaved access roadways, and parking and staging areas will be subject to dust control. 5. Herbicides application will be in accordance with existing laws and manufacturers' instructions (i.e., pesticide/herbicide labels). All herbicide chemicals used must be registered for use in the U.S. and California and must have a label certifying that the Federal Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR) have approved the herbicide for use. Herbicides will not be sprayed within 50 feet of known occurrences of any other special-status plant occurrence or federal land. No rodenticides will be used on any project. 6. All open trenches, excavations, and/or holes more than 2 feet deep will be backfilled or covered at the end of each workday to prevent wildlife entrapment. If an excavation or hole is too large to cover, escape ramps will be installed at an incline ratio of no greater			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	than 2:1 at least every 300 feet. All trenches and excavations will be inspected for the presence of wildlife each day prior to the start of work. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. 7. All straight construction pipes, culverts, or similar structures with a diameter of 3.5-inches or greater that are stored at a construction site overnight will be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. All bent pipe with a diameter of 3.5-inches or greater that cannot be visually inspected for wildlife with 100 percent certainty will be left in place and monitored by a Qualified Biologist using wildlife cameras and/or tracking material prior to being removed, capped, moved, or buried. If any wildlife is discovered inside a pipe, that section of pipe is not to be moved until the animal vacates the pipe on its own accord. 8. To enable SJKF and other wildlife to pass through the Project Area, any new perimeter fencing installed around project work areas, with the exception of where fencing is required to exclude wildlife from known hazards, will include a 4 to 6-inch opening between the fence and the ground or the fence will be raised 4 to 6 inches above the ground. The bottom of the fence fabric will be knuckled (wrapped back to form a smooth edge), if necessary, to protect wildlife from injury when passing underneath. The perimeter fencing would be installed outside of the BNLL exclusion fence. The BNLL exclusion fence is made to exclude reptiles and amphibians and will not keep SJKF from passing through. 9. All vertical tubes used in project construction and chain link fencing poles will be capped to avoid entrapment and death of special-status wildlife and birds.			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	10. Discovery of State or federally listed species that are injured or dead will be reported immediately via telephone and within 24 hours in writing to CDFW and USFWS as relevant. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information, such as the cause of injury or death (if known). 11. All activity will use previously disturbed areas to the maximum extent feasible to minimize the amount of new disturbance in areas with existing natural lands. 12. Vehicle, equipment, and material storage will be limited to previously disturbed areas or predefined storage/laydown areas that are incorporated into work site limits. All concrete and asphalt debris will be removed from the Project Area to either a designated concrete or asphalt storage facility, or off site for recycling or proper disposal on completion of construction. 13. No vehicles or construction equipment will be parked within a water of the State, including any dry wash or drainage, nor shall vehicles or construction equipment cross, or travel within a water of the State, including any wash or drainage, where and when water is flowing. No materials will be stored within a Water of the State. 14. All construction equipment and construction personnel vehicles will be checked underneath prior to moving them, to ensure that no wildlife is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles will be left in place until the wildlife moves out of harm's way on its own accord, as determined by a Qualified Biologist. 15. All tracked vehicles and other construction equipment entering the Project Area from outside of			

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	Kern County will be washed or maintained to be weed-free. 16. All washing of trucks, paint, equipment, or similar activities including concrete washout will occur in designated areas/facilities where runoff is fully contained for collection prior to off-site disposal. Wash water may not be discharged from the Project Area, must be stored in a manner that excludes sensitive wildlife species, and located at least 100 feet from any water of the State.			
MM-CUL-1/TCR-1 Discovery of Previously Unknown Cultural or Tribal Cultural Resources	In the event any potential tribal cultural resources, archaeological resources/materials, other cultural resources, or articulated or disarticulated human remains are discovered during ground disturbance or construction activities, Bidr shall cease any ground disturbing and construction activities within 50 feet of the find, or an agreed upon distance based on the Project Area and nature of the find. Work stoppage shall remain in place until the qualified archaeologist, or other designated site specialist, determines the nature of the discovery, and evaluates the significance of the discovery and recommends appropriate treatment measures. Per CEQA Guidelines Section 15126.4(b)(3), Project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. If it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with CalGEM, which may include data recovery or other appropriate measures. CalGEM will consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. Tribal cultural resources shall not be photographed nor be subjected to any	During all construction activities; upon discovery of previously unknown cultural or tribal cultural resources. Unanticipated discovery plan; report prepared by a qualified archaeologist documenting evaluation and/or additional treatment of the resource as applicable; on-site monitoring.	Bidr must submit the unanticipated discovery plan to CalGEM for review and approval. The report prepared by a qualified archaeologist documenting evaluation and/or additional treatment of the resource must be provided to CalGEM and the Southern San Joaquin Valley Information Center.	CalGEM

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	studies beyond such inspection as may be necessary to determine the nature and significance of the discovery. If the discovery is confirmed as potentially significant or a tribal cultural resource, an Environmentally Sensitive Area (ESA) will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities will be permitted within the ESA until the area has been cleared for construction. The exact location of the resources within the ESA must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. If after consultation it is deemed appropriate, archaeological materials recovered during any investigation shall be curated at an accredited curation facility. The qualified archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to CalGEM and the Southern San Joaquin Valley Information Center.			
MM-CUL-2/TCR-2 Unanticipated Discovery of Human Remains	If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash or other remnants of burning ceremonies) are uncovered during Project construction, Bidr shall immediately halt all ground disturbing work within 50 feet of the discovery or other agreed upon distance based on the Project Area and nature of the find; treat the remains with respect and dignity; contact the Kern County Coroner within 24 hours to evaluate the remains; and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1), California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. The Kern County Planning and Natural Resources Department shall be notified concurrently. If the County Coroner determines the remains to be of	During all construction activities; upon unanticipated discovery of human remains. On-site monitoring.	Bidr must report any unanticipated discovery to Kern County Coroner and Kern County Planning and Natural Resources Department within 24 hours of the find. If the County Coroner determines the remains to be of Native American origin, the County Coroner shall contact the Native American Heritage	CalGEM; Kern County Planning and Natural Resources Department; Native American Heritage Commission

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	Native American origin, the County Coroner shall contact the Native American Heritage Commission within 24 hours of this determination, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill (AB) 2641). The Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendant regarding their recommendations, if applicable, taking into account the possibility of multiple humans remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply. Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act (Cal. Govt. Code § 6250 et seq.).		Commission within 24 hours of this determination.	
DF-EN-1	The Project would include energy- and fuel-efficient design features that would help minimize inefficient or wasteful use of energy and increase conservation during construction. For example, the proposed grading plan is designed to balance all earthwork on site, which would avoid truck trips that would have been required to haul-in fill materials to the site and haul-off of materials to be exported off-site. This would	--	--	CalGEM; Kern County Planning and Natural Resources Department

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	reduce fuel use, while also reducing temporary increases in noise and exhaust emissions. The grading plan and on-site construction equipment would also minimize impacts to the surrounding transportation network that would result from truck traffic associated with soil import/export and mobilization/demobilization.			
MM-EN-1 Energy Conservation	Bidr shall implement all of the following applicable energy conservation control measures during construction of the project: 1. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 2. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available, and it is not feasible to use propane or natural gas.	During all construction activities. Compliance Monitoring Report; on-site monitoring.	Compliance Monitoring Report must be submitted to SJVAPCD.	SJVAPCD
RR-EN-1	Compliance with CARB anti-idling and emissions requirements specified in 13 C.C.R. § 2485	--	--	SJVAPCD
RR-EN-2	Compliance with CARB Off-Road Diesel Regulations as required by 13 C.C.R. § 2449	--	--	SJVAPCD
RR-GEO-1	Compliance with most recently adopted building codes	--	--	Kern County Public Works Department
RR-GHG-1	Compliance with Measure I-2 of the AB 32 Scoping Plan	--	--	SJVAPCD
RR-GHG-2	Compliance with the AB 32 Cap-and-Trade Program	--	--	SJVAPCD

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
RR-GHG-3	Compliance with SJVAPCD Rule 2260 (Registration Requirements for Equipment Subject to California's Oil and Gas Regulation)	--	--	SJVAPCD
RR-GHG-4	Compliance with SJVAPCD Rule 4409 (Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities)	--	--	SJVAPCD
RR-GHG-5	Compliance with federal New Source Performance Standards specified in 40 CFR Part 60	--	--	SJVAPCD
RR-GHG-6	Compliance with California Emission Standards for Off-road Compression-Ignition Engines as specified in 13 C.C.R. § 2423(b)(1).	--	--	SJVAPCD
MM-HAZ-1 WEAP BMP Training	Bidr's WEAP shall include all training requirements identified as Best Management Practices (BMPs) and include annual training for all field personnel (including employees, agents, and contractors). The WEAP shall include hazardous materials and hazardous waste management, and emergency preparedness, release reporting, and response requirements. The WEAP shall also include training regarding the recognition and protection of possible buried paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. Training shall inform construction personnel of the procedures to be followed upon the discovery of paleontological materials. These procedures include notification of a paleontological monitor upon an accidental discovery and cessation of all work at the site of discovery until written approval to proceed is provided by the monitor. All personnel shall be instructed that unauthorized collection or disturbance of fossils and artifacts is unlawful.	Prior to all construction activities. WEAP training records.	Bidr must submit record of WEAP training to CalGEM.	CalGEM

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
MM-HAZ-2 Spill Prevention	Bidr shall develop, maintain, and implement a SPCC Plan in compliance with 14 C.C.R. § 1722.9 and the Oil Pollution Prevention requirements of the Clean Water Act (40 CFR Part 112), and that includes the following measures to prevent, repair, and remediate accidental leaks and spills from oil and gas operations. 1. Construction activities shall be conducted to allow for easy clean-up of spills. Construction crews shall have sufficient tools, supplies, and absorbent and barrier materials to contain and recover spilled materials. 2. Fuels and lubricants shall be stored only at designated staging areas, at least 100 feet away from the edge of water bodies. Fuel and lubricant tanks shall have appropriate secondary spill containment (e.g., curbs), and all refueling, and lubrication equipment shall be restricted to upland areas at least 100 feet away from stream channels and wetlands. 3. Any fuel truck shall carry an oil spill response kit and spill response equipment at all times. 4. All routine equipment maintenance shall be performed at the well pad, and promptly collect and lawfully dispose of wastes at an authorized recycling, treatment, or disposal facility. 5. A sufficient supply of sorbent and barrier materials shall be maintained on construction sites, and sorbent and barrier materials shall also be utilized to contain runoff from contaminated areas. 6. Shovels and drums shall be stored at the well pad or be readily available. If small quantities of soil become	During all project activities; upon accidental leak and/or spill. Report immediately and thereafter monthly or at predetermined intervals; on-site monitoring.	Submit timely reports to CUPA, surface landowner, sensitive receptors located within 300 feet, and other applicable agencies.	CalGEM; CVRWQCB; Kern County Environmental Health Division

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	contaminated, hand tools such as shovels or other appropriate tools, shall be used to collect the soil and the material shall be stored in storage drums. Large quantities of contaminated soil may be bio-remediated on-site or at a designated remediation facility, subject to government approval, or collected utilizing heavy equipment, and stored in drums or other suitable containers prior to disposal. Should contamination occur adjacent to staging areas as a result of runoff, shovels and/or heavy equipment shall be utilized to collect the contaminated material. Contaminated soil shall be disposed of in accordance with state and federal regulations. 7. Above-ground tanks, valves and other equipment shall be visually inspected monthly and when the tank is refilled. Inspection records shall be maintained. Applicants shall periodically check tanks for leaks or spills. 8. Drain valves on all tanks shall be locked to prevent accidental or unauthorized discharges from the tank. 9. Equipment maintenance shall be conducted in staging areas or other suitable locations (i.e., maintenance shops or yards) to the extent practical. 10. Bidr shall notify the Kern County Environmental Health Division, Certified Union Program Agency (CUPA), surface landowner, and sensitive receptors located within 300 feet, of any hazardous materials/waste release immediately upon discovery, and to other applicable agencies as required by other laws. Bidr shall immediately contain the leak (e.g., by isolating or shutting down the leaking equipment),			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	clean up contaminated media (e.g., soils), and repair the leak prior to recommencing operations. Bidr shall report the status and progress of the leak repair and remediation work to the County and the CUPA on monthly intervals or predetermined intervals until the repair has been completed. Contaminated media shall be analyzed according to 22 C.C.R. §§ 66261.21-66261.24 for determination of appropriate hazardous waste disposal. Hazardous Waste Determination procedures are provided in 22 C.C.R. § 66262.11. 11. If a release cannot be repaired or remediated within 48 hours, and has potential impact to sensitive receptors, Bidr shall incur costs to sample and analyze the potentially affected area, which may include soil, groundwater, outdoor or indoor air of sensitive receptors within 300 feet of the leak. Bidr shall pay all temporary relocation costs (e.g., housing, food, and transportation) for any exposed sensitive receptor until such time as the leak has been repaired and post-indoor air testing has been completed, as confirmed by identified agency having oversight of the remediation.			
MM-HAZ-3 Fire Prevention	Bidr shall implement the following measures: 1. Maintain firefighting apparatus and supplies required by the Kern County Fire Department. 2. Maintain a list of all relevant fire-fighting authorities for each work site. 3. Have available equipment to extinguish incipient fires and or construction of a fire break, such as: chemical fire extinguishers, shovels, axes, chain saws, etc.	During all construction activities. Compliance Monitoring Report; on-site monitoring.	Initial Compliance Monitoring Report must be submitted to Kern County within 30 days of Project implementation and annually thereafter.	Kern County Fire Department

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	4. Carry water or fire extinguishers and shovels in non-passenger vehicles in the field. 5. Have and maintain an adequate supply of fire extinguishers for welding, grinding, and brushing crews. 6. Protect individual safety to contain any fire that occurs and notify local emergency response personnel. 7. Remove any flammable wastes generated during oil and gas activities regularly. 8. Store all flammable materials used in oil and gas activities away from ignition sources and in approved containers. 9. Allow smoking only in designated smoking areas. 10. Prohibit smoking where flammable products are present and when the fire hazard is high. Train personnel regarding potential fire hazards and their prevention. 11. All internal combustion engines, stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order. 12. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition.			

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	13. Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. 14. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials. 15. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats.			
MM-HAZ-4 Hot Work Equipment	Although Bidr does not have a hot work program in place at the field, Bidr shall restrict the use of chainsaws, chippers, vegetation masticators, grinders, tractors, torches, and explosives at its locations, and ensure the sites where this equipment is used are equipped with portable or fixed fire extinguishers and/or a water tank, with hoses, fire rakes, and other tools to extinguish and or control incipient stage fires. The WEAP shall include fire prevention and response training for workers using these tools.	During all construction activities. Compliance Monitoring Report; on-site monitoring.	Initial Compliance Monitoring Report must be submitted to Kern County within 30 days of Project implementation and annually thereafter.	Kern County Planning and Natural Resources Department
RR-HAZ-1	Compliance with 14 C.C.R. § 1774.2, which requires a Pipeline Management Plan	--	--	CalGEM
RR-HAZ-2	Compliance with all Kern County Fire Codes	--	--	Kern County Fire Department
DF-HYDRO-1	Water used for drilling and dust suppression during construction would be obtained from the Belridge Water Storage District through a nearby operator and delivered by truck.	--	--	CalGEM; CVRWQCB
DF-HYDRO-2	The Project would involve construction of an earthen well pad but graded prior to drilling	--	--	CalGEM

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
MM-HYDRO-1 Stormwater BMPs	Bidr shall implement BMPs during construction and operation activities. All selected practices shall be shown on a drainage implementation plan and self-certified as complete and feasible by a licensed professional qualified in drainage and flood control issues. The following BMPs shall be implemented and shown on the drainage plan: 1. Utilizing established facilities design, and construction or similar standards as applicable appropriate (e.g., ASTM, API). 2. Implementing good housekeeping and maintenance practices. 3. Preventing trash, waste materials and equipment from construction storm water; 4. Maintaining the wellhead, compressors, tanks and pipelines in good condition without leaks or spills. 5. Designing and maintaining a graded pad with berms to not actively erode and discharge sediment; and 6. Maintaining vehicles in good working order. 7. Implementing spill prevention and response measures: 8. Utilizing preventative operating practices such as tank level monitoring, safe chemical handling and conducting regular inspections. 9. Developing and maintaining a spill response plan.	During all construction activities. Compliance Monitoring Report.	Initial Compliance Monitoring Report must be submitted to Kern County and CVRWQCB within 30 days of Project implementation and annually thereafter.	Kern County Planning and Natural Resources Department; CVRWQCB

Regulatory Requirement, Design Feature, and/or Mitigation Measure	Mitigation Description	Timing & Method of Verification	Reporting	Responsible Agency
	10. Conducting spill response training for employees and have a process to ensure contractors have the necessary training. 11. Maintaining spill response equipment on site. 12. Implementing material storage and management practices. 13. Preventing unauthorized access. 14. Utilizing "run-on" and "run-off" control berms and swales around all pad areas; and 15. Stabilizing exposed slopes through vegetation and other standard slope stability methods.			
RR-HYDRO-1	Compliance with stormwater discharge requirements as specified in 40 C.F.R. §122.26(c)(1)(iii)	--	--	CVRWQCB
RR-HYDRO-2	Bidr will obtain coverage under the Construction General Permit (Construction General Permit Order 2009-0009-DWQ, as amended by 2010-00014-DWQ and 2012-0006-DWQ) in advance of construction activity, if required	--	--	CVRWQCB
Tribal	The Cultural/Tribal resource mitigation measures are listed above.			
DF-UTL-1	Waste generated during drilling of the well would be trucked offsite for disposal in an approved landfill	--	--	CalGEM
DF-UTL-2	Soil cuttings and water generated during the well installation will be stored onsite pending waste profile analysis	--	--	CalGEM

SECTION 5 References

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SECTION 6 List of Acronyms and Abbreviations

AB	Assembly Bill
bbl	Barrels
BLM	U.S. Bureau of Land Management
BMP	Best Management Practice
CAA	Clean Air Act
CalGEM	Geologic Energy Management Division
CARB	California Air Resources Board
C.C.R.	California Code of Regulations
C.F.R.	Code of Federal Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dB	Decibel
dBA	A-weighted Decibel
EPA	Environmental Protection Agency
FESA	Federal Endangered Species Act of 1973
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
GHG	Greenhouse gas
HAP	Hazardous air pollutant
H_2S	Hydrogen sulfide
HCP	Habitat Conservation Plan
hr	Hour
IS	Initial Study
kWh	Kilowatt Hour
L_{dn}/DNL	Project Area Noise Exposure in terms of the Day Night Level
L_{eq}	Equivalent Continuous Noise Level

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MMRP	Mitigation Monitoring and Reporting Plan
mph	Miles per Hour
$MTCO_2e$	Metric Tons Carbon Dioxide Equivalent
MWh	Megawatt Hours
NAAQS	National Ambient Air Quality Standards
NOI	Notice of Intention
NO_x	Nitrogen oxides
NCCP	Natural Community Conservation Plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Services
PFYC	Potential Fossil Yield Classification
PG&E	Pacific Gas & Electric
PM	Particulate matter
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
ppb	Parts per billion
ppm	Parts per million
SJAS	San Joaquin Antelope Squirrel
SJVAPCD	San Joaquin Valley Air Pollution Control District
SB	Senate Bill
SO_2	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasures
SRA	State Responsibility Area
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compound
WEAP	Worker Environmental Awareness Program

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