San Joaquin Valley Unified Air Pollution Control District

Chevron USA, Inc.
Steam Generators Project

Project Number S-1140568

Kern River Oilfield
Kern County

Initial Study and Draft Mitigated Negative Declaration

November 2014

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INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

Chevron USA, Inc. Steam Generators Project

Project Number: S-1140568

October 2014

Lead Agency:	San Joaquin Valley Air Pollution Control District 1990 East Gettysburg Avenue Fresno CA 93726-0244
Agency CEQA Contact:	Mark Montelongo, Senior Air Quality Specialist Phone: (559) 230-6000 Fax: (559) 230-6061
Agency Permits Contact:	William Jones, Air Quality Engineer Phone: (661) 392-5500 Fax: (661) 392-5585
Document Prepared by:	Mark Montelongo, Senior Air Quality Specialist Sharla Yang, Air Quality Specialist
Agency Document Review:	Patia Siong, Supervising Air Quality Specialist Chay Thao, Program Manager
Applicant and Location:	Chevron USA, Inc. 9525 Camino Media Bakersfield, CA 93311
Applicant Contact:	Daniel Beck – Air, Health, Environment and Safety San Joaquin Valley Business Unit Phone: (661) 654-7141 Kristopher Rickards – Health and Environmental Safety Specialist/Engineer San Joaquin Valley Business Unit Phone: (661) 654-7796

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A. INTRODUCTION

Chevron USA, Inc. (Chevron USA) is a Title V oil production company with facilities located in Kern County, California. The San Joaquin Valley Unified Air Pollution Control District (District) has received an Authority to Construct (ATC) application package from Chevron USA to install five new 85.0 MMBtu/hr natural gas-fired steam generators in the Kern River Oilfield, and to relocate an existing 62.5 MMBtu/hr natural gas-fired steam generator from the Lost Hills Oilfield to the Kern River Oilfield to enhance oil production activities (Project). The Project is consistent with current operations and will allow for continued oil and gas related activities within the Kern River Oil Field Project area. As presented in this environmental document, the District has conducted an Initial Study and concludes that, with mitigation, the Project will have a less than significant environmental impact.

B. PURPOSE AND AUTHORITY

The District has discretionary approval power over the Project, pursuant to District Rule 2010 (Permits Required) and District Rule 2201(New and Modified Stationary Source Review Rule). As such, the District is the public agency having principal responsibility for approving the project and serves as Lead Agency (CCR §15367).

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The ERG was prepared to comply with this requirement and is an internal document used to comply with CEQA.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Under CEQA the Lead Agency is required to:

- Conduct preliminary reviews to determine if applications are subject to CEQA [CCR §15060].
- Conduct review to determine if projects are exempt from CEQA [CCR §15061].
- Prepare Initial Studies for projects that may have adverse environmental impacts [CCR §15063].
- Determine the significance of the environmental effects caused by the project [CCR §15064].
- Prepare Negative Declarations or Mitigated Negative Declarations for projects with no significant environmental impacts [CCR §15070].
- Prepare, or contract to prepare, EIRs for projects with significant environmental impacts [CCR §15081].
- Adopt reporting or monitoring programs for the changes made to projects or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment [PRC §21081.6 & CCR §15097].
- Comply with CEQA noticing and filing requirements.

C. PROJECT BACKGROUND INFORMATION

Project Description

Chevron USA is an oil production company that operates oil and gas production facilities across California, including the Kern River Oilfield in Kern County. Chevron USA has a Title V Operating Permit with the District for its operations and is classified as a major source as defined in Section 3.24 of District Rule 2201 (New and Modified Stationary Source Review). As such, the installation and operation of stationary source equipment (i.e.: steam generators) for this Project is subject to District permit requirements. One major requirement is that new and modified stationary source equipment that has air contaminant emissions must satisfy the requirements of New Source Review (NSR). The main requirements of NSR are to require the installation of Best Available Control Technology (BACT), if thresholds are exceeded, to minimize emission increases from such equipment and to mitigate emission increase over certain thresholds by providing emission reductions either by limiting the use of existing equipment or by providing emission offsets.

The District has received an Authority to Construct (ATC) application package from Chevron USA proposing to install five new 85.0 MMBtu/hr natural gas-fired steam generators in the Kern River Oilfield, and to relocate an existing 62.5 MMBtu/hr natural gas-fired steam generator from the Lost Hills Oilfield Stationary Source to the Kern River Oilfield to enhance oil production activities in Kern County, California.

Process Description

Chevron USA operates permitted equipment within their oil fields, utilized for thermally enhanced production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce viscosity of crude oil, thereby facilitating thermally enhanced oil production.

Project Location

The proposed steam generators and the existing steam generator to be relocated will be located in three specified locations within the Kern River Oilfield. The location of the proposed steam generators are identified below in Table 1. The Kern River Oilfield is located within Kern County, California which is in the San Joaquin Valley Air Basin (see Figure 1). In addition, Figures 2 and 3 present the location and boundaries of Chevron USA's operation within the Kern River Oilfield.

Table 1 – Steam Generator Locations

Assessor's Parcel Number	Section	Township	Range	USGS
481-110-14	SE1/4 Section 25	28 S	27 E	Fee A
481-050-11	SE1/4 Section 13	28 S	27 E	Angus
093-210-36	SE1/4 Section 31	28 S	28 E	ANO

Figure 1: The San Joaquin Valley Air Basin

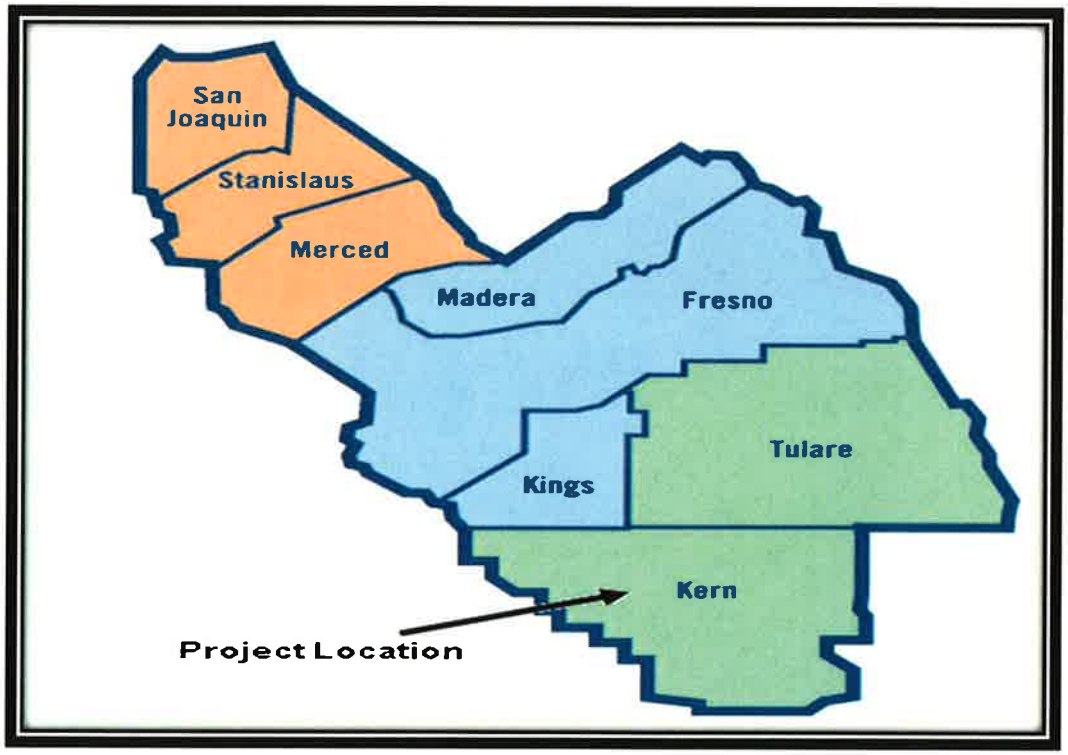
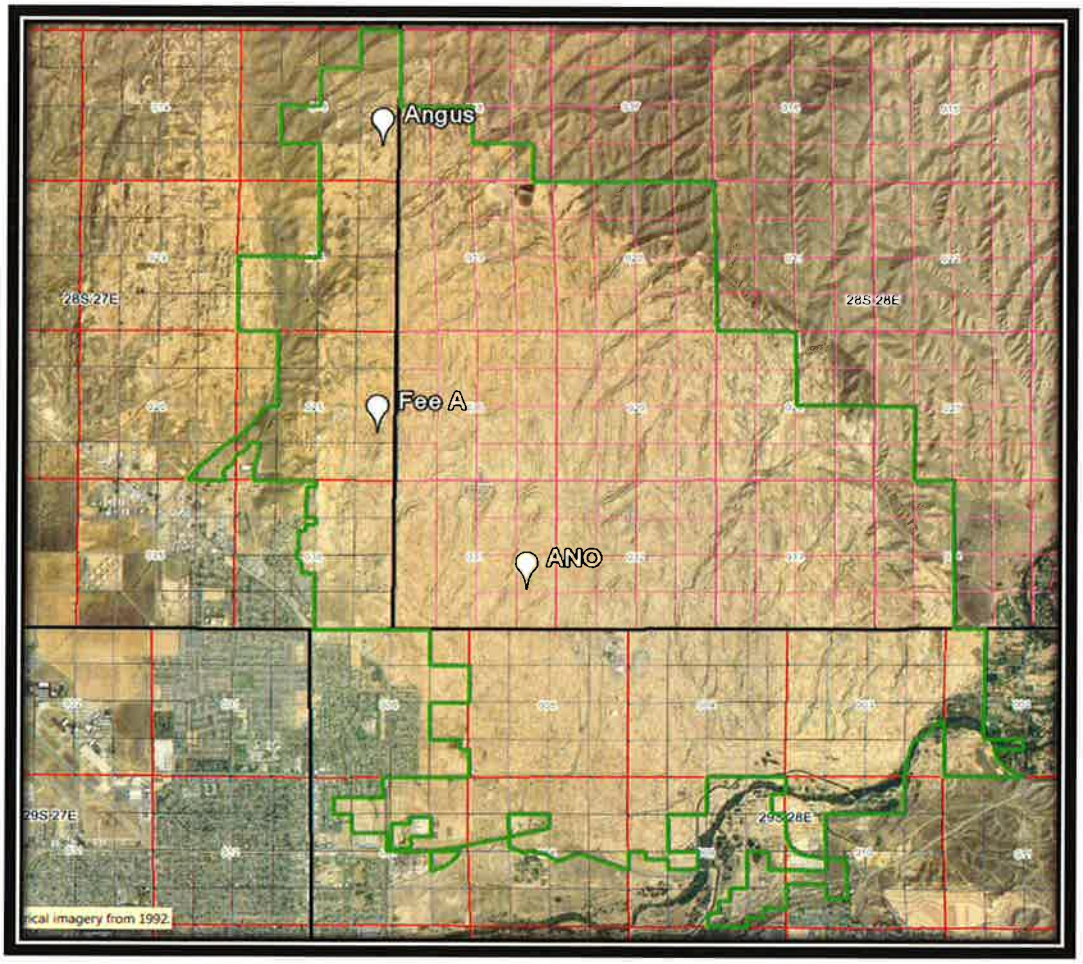


Figure 2: Kern River Oil Field Location

Figure 3: Kern River Oil Field Boundaries & Project Sites



General Plan Designation and Zoning

The Project sites are currently designated in the 2009 Kern County General Plan as Mineral and Petroleum (Code 8.4) and State and Federal Land (Code 1.1). The Project sites are currently zoned as Limited Agriculture (Zone A-1) and Exclusive Agriculture (Zone A). Pursuant to Section 19.12.20(E) and Section 19.14.020 (E) of the Kern County Zoning Ordinance, steam generators (excluding coal fired) are a permitted use, by right in Zone A and Zone A-1. Table 2 below identifies the General Plan Designation and Zoning for each of the Project sites within the oilfield boundary.

Table 2: General Plan Land Use Designation and Zoning

Assessor's Parcel Number	General Plan Designation	Zoning
481-110-14	Mineral and Petroleum	Limited Agriculture (Zone A-1)
481-050-11	Mineral and Petroleum (5 acre parcel minimum) and State and Federal Land	Limited Agriculture (Zone A-1)
093-210-36	Mineral and Petroleum	Exclusive Agriculture (Zone A)

Surrounding Land Uses and Setting

The Project sites are within the existing oilfield which is currently used for oil production by Chevron, USA. The area immediately surrounding the Project sites are zoned for agricultural and is designated as a mineral and petroleum land use. These uses include general agricultural operations and oil field production. Highland Elementary School is the nearest school to the Project sites and is located south west of the oilfield. The District has verified that the Project is not within 1,000 feet of the school's outer boundary; therefore the public notification requirement of the California Health and Safety Code 42301.6 is not applicable to the Project.

Other Public Agencies Whose Approval Is Required

The District has identified the following agencies as having approval authority for the Project.

US Environmental Protection Agency (US EPA)

The Project is classified as a Title V minor modification to be processed with a Certificate of Conformity (COC), and its ATC application shall be submitted to the US EPA for a 45-day comment period. Chevron must apply to administratively amend the Title V operating permit to include the requirements of the ATCs issued with the Project.

US Fish and Wildlife Service (USFWS)

The USFWS has regulatory authority over projects that could result in the "take" of any species identified as threatened or endangered. If the Project would result in the incidental take of any federally identified species, an Incidental Take Permit and/or a Habitat Conservation Plan would be required.

California Department of Fish and Wildlife (CDFW)

The CDFW has regulatory authority over projects that could result in the "take" of any species identified by the State of California as threatened or endangered. If the Project would result in the "take" of any identified species, an Incidental Take Permit would be required.

California Regional Water Quality Control Board (RWQCB)

The Project will result in no waste or water discharge; hence no approvals from the RWQCB will be required. Also, no streambed or lake alterations will occur as a result of the Project.

D. DECISION TO PREPARE A MITIGATED NEGATIVE DECLARATION

Consistent with CEQA requirements the District prepared an Initial Study that evaluated potential environmental effects of the Project. The District has determined with mitigation, the Project would have a less than significant impact on the environment. The District concludes that a Mitigated Negative Declaration would be appropriate for the Project. Project design elements and mitigation measures that reduce the Project's impact on environment would be enforced through mitigation and District permits.

E. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

F. DETERMINATION

I certify that the Project was independently reviewed and analyzed and that this document reflects the independent judgment of the District.

☐ 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 has been 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: NOV 10 2014

Printed Name: Arnaud Marjollet

Title: Director of Permit Services

G. ENVIRONMENTAL IMPACT CHECKLIST

I. Aesthetics Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to trees, rock, outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				✓
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

I. AESTHETICS

Scenic Vistas and Visual Character (a-d)

Conclusion: The Project will not have a substantial effect on scenic vistas, damage scenic resources, degrade visual character in and around the sites or create new sources of light or glare.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is consistent with surrounding land uses, and there are no scenic vistas or scenic resources such as trees, rock outcroppings, or historic buildings on the Project sites or adjacent properties. The absence of these features on or nearby the Project sites precludes the possibility of potential adverse impacts. The manufacturing of the steam generators will occur off-site and will be delivered to the Project sites; however, ground preparation activities such as simple grading of the area and concrete foundations for each steam generator unit will be conducted prior to installation of the steam generators. Construction activities may occur at night. As such, lighting impacts associated with construction will be temporary in nature. Once construction has commenced and the steam generators have been installed, only minor tie-ins will be required with minimal operational lighting installed consistent with existing Chevron USA operations. Therefore, the District concludes that there is no substantial record to support a conclusion that construction and operation of the Project would have a detrimental impact on aesthetics.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

California Department of Transportation. *Officially Designated State Scenic Highways.* Website: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

II. Agricultural Resources	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resource Board. Would the Project				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)), timberland (as defined by Public Resource 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?				✓

II. Agricultural Resources (continued) Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
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?				✓

II. AGRICULTURAL RESOURCES

Farm and Forest Lands (a-e)

Conclusion: The Project will not conflict with existing zoning and will not have an impact on agricultural and forest lands as identified in the above.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield, which historically has been allowed for the exploration and production of oil (see Figures 2 and 3). The Project sites within the oilfield are zoned as Exclusive Agriculture (Zone A) and Limited Agriculture (Zone A-1). Per the 2009 Kern County General Plan, the Project sites are designated as Mineral Petroleum (Code 8.4) and State and Federal Land (Code 1.1). Pursuant to the Kern County Zoning Ordinance (§19.12.020 (E) and §19.14.020(E)), steam generators (excluding coal fired) are a permitted use in Exclusive Agriculture and Limited Agriculture zoning designations. The Project sites are not designated as Prime Farmland, Unique Farmland, or of Statewide Importance. No forest lands are located within the Oilfield. The Project is consistent with current and surrounding land uses and will not convert farm or forest lands to non-farm or non-forest uses. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that construction or operation of the Project would have an impact on agricultural or forest resources.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

California Department of Conservation. *Farmland Mapping & Monitoring Program.* Website: http://www.conservation.ca.gov/DLRP/fmmp/Pages/Index.aspx.

County of Kern. *Planning Documents.* Website: http://pcd.kerndsa.com/planning-documents.

County of Kern. *Code of Ordinances, Title 19 - Zoning.* Website: http://www.co.kern.ca.us/planning/pdfs/KCZOJul12.pdf.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

III. Air Quality Would the Project:		**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?		✓		
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✓		
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		✓		
d)	Expose sensitive receptors to substantial pollutant concentrations?			✓	
e)	Create objectionable odors affecting a substantial number of people?				✓

III. AIR QUALITY

Air Quality Plans and Standards (a, b, c)

Conclusion: The Project, with the incorporation of mitigation measures, will have a less than significant impact on air quality.

Discussion: The District is tasked with implementing programs and regulations by the Federal Clean Air Act and the California Clean Air Act and has prepared plans to attain federal and state Ambient Air Quality Standards (AAQS). The District has established thresholds of significance for criteria pollutant emissions, which are based on federal and District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation.

Emission reductions achieved through implementation of federal offset requirements are a major component of the District's air quality plans. Emissions from operational non-permitted equipment and activities are evaluated separate from permitted equipment and activities. A project would be determined to have a significant impact on air quality if the emissions sum for any criteria pollutant exceeds its respective threshold of significance. The District's thresholds of significance for criteria pollutant emissions are presented below in Table 3.

Table 3: District Thresholds of Significance for Criteria Pollutants

Pollutant	Construction Emissions Threshold (*tpy)	Permitted Operational Emissions Threshold (tpy)	Non-Permitted Operational Emissions Threshold (tpy)
NOx	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15
CO	100	100	100
ROG (VOC)	10	10	10
* tpy = tons per year			

Project Details

Chevron USA is an oil production company that operates oil and gas production facilities across California, including the Kern River Oilfield in Kern County. Chevron USA proposes to install five new 85.0 MMBtu/hr natural gas-fired steam generators in the Kern River Oilfield, and to relocate an existing 62.5 MMBtu/hr natural gas-fired steam generator from the Lost Hills Oilfield to the Kern River Oilfield to enhance oil production activities in Kern County, California. The locations of the proposed steam generators are identified in Table 1.

Construction Emissions

Construction of the Project is expected to begin in 2015 upon issuance of District air permits and will include simple grading of the area, concrete foundation for each steam generator unit, worker commutes, and installation of five 85.0 MMBtu/hr steam generators. Upon installation of the steam generators, new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal will be installed underground to support operational activities. The additional 62.5 MMBtu/hr steam generator will simply be relocated to one of the locations identified within Table 1. No drilling is involved with the Project. The Project will utilize existing roads and therefore, no new roads will be constructed. The Project is expected to be complete in year 2017.

Table 4: Project Construction Emissions

Construction Emissions	Annual Emissions (tons)			
	NO_x	PM_{10}	ROG (VOC)	CO
Year 2015 Emissions	3.02	0.72	0.34	1.63
Year 2016 Emissions	3.15	0.75	0.35	1.70
Year 2017 Emissions	0.13	0.03	0.01	0.07
District Threshold of Significance	10	15	10	100
Exceed Thresholds?	No	No	No	No

As shown in Table 4, construction emissions will not exceed the District's thresholds of significance for criteria pollutants. The District concludes that Project construction emissions will have a less than significant impact on air quality and therefore, mitigation measures are not required.

Operational Emissions

Mobile Source Emissions: The Project will be maintained and manned by existing Chevron USA personnel and contractors. Therefore, the Project will not result in any new mobile source emissions.

Stationary Source Emissions: The Project consists of the installation of five (5) new 85.0 MMBtu/hr natural gas-fired steam generators, in addition to relocating an existing 62.5 MMBtu/hr natural gas-fired steam generator from the Lost Hills Oilfield to the Kern River Oilfield to enhance oil production activities. The District has conducted an engineer evaluation for the Project and determined that Best Available Control Technology (BACT) is triggered for NOx, CO, VOC, PM10 and SOx. The Chevron USA facility is an existing Major Source and is in compliance with New Source Review requirements. Also, offsets are required for the Project and the District has imposed permit conditions consistent with New Source Review requirements.

Table 5 below presents the operational stationary source emissions at full build-out for the five (5) 85.0 MMBtu/hr natural gas-fired steam generators, and the relocate of a 62.5 MMBtu/hr steam generator. As presented in Table 5 below, compliance with District Rule 2201 (New Source Review Rule) will ensure Project related criteria pollutant emissions be offset through the surrendering of Emission Reduction Credits (ERCs). The requirement for offsets will be enforced through permit conditions. Therefore, the District concludes that through a combination of project design features and permit conditions, Project related stationary source emissions will have a less than significant impact on air quality.

Table 5. Project Stationary Source Operational Emissions – CEQA Significance

	Annual Emissions (tons/year)				
	NOx	**SOx**	**PM_{10}**	**CO**	**VOC**
Initial Project Stationary Source Emissions	17.08	6.09	6.41	38.4	11.74
Emission Reduction Credits (ERCs) to be Surrendered per Rule 2201	25.63	6.09	6.41	0	15.36
Final Project Stationary Source Emissions	-8.55	0	0	38.4	-3.62
Significance Thresholds	10	27	15	100	10
Exceed Thresholds	No	No	No	No	No

Air Quality Plans

As summarized in Table 4, Project related construction emissions are below the District's thresholds of significance. Furthermore as summarized in Table 5, operational

stationary source emissions will be mitigated to below the District's thresholds through the surrendering of Emission Reduction Credits (ERCs). The ERCs must be surrendered to the District prior to commencement of operation of the equipment proposed under the ATC. As such, the Project does not conflict with the implementation strategy of the San Joaquin Valley Regional Air Quality Management Plans (*2008 PM 2.5 Plan*; *2007 8-Hour Ozone Plan*; *2007 PM_{10} Maintenance Plan*; *2006 PM_{10} SIP*; *2003 PM_{10} SIP, 2012 PM2.5 Plan, 2013 Plan for the Revoked 1-hour Ozone Standard*). Therefore, no further mitigation measures are required.

Air Quality Standards

Determination of whether project emissions would violate any applicable Ambient Air Quality Standards (AAQS) is largely a function of air quality dispersion modeling. If Project emissions would not exceed state and federal AAQS at the Project's property boundaries, the Project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The District performed an AAQA for both the national and state AAQS to determine whether Project related criteria pollutant emissions have the potential to contribute to the possible violation of existing air quality standards. The AAQA indicates that Project related criteria pollutant emissions will not cause or contribute to an exceedance of either national or state AAQS. Therefore, the Project is not expected to result in a violation of an air quality standard.

Cumulative Impacts

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of state and federal AAQS is a function of successful implementation of the District's attainment plans. Compliance with District rules and regulations ensures successful implementation of the District's attainment plans. As discussed above, the Project will comply with all District rules. Therefore, Project related emissions would have a cumulatively less than significant impact on air quality.

Mitigation: To ensure compliance with District New Source Review (NSR) requirements for offsetting operational emissions, Chevron USA shall surrender ERCs sufficient to completely offset operational emissions as required by District NSR requirements. The following measures will be made conditions of Project approval and will be included in the Project ATCs:

AIR-1: To ensure compliance with District New Source Review (NSR) requirements for offsetting operational emissions, the following measures will be made conditions of Project approval (S-1140568) and will be included in the Project ATCs:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions:

1st quarter – 2,234 lb., 2nd quarter - 2,234 lb., 3rd quarter - 2,234 lb., and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,536 lb., 2nd quarter - 1,536 lb., 3rd quarter - 1,536 lb., and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of SOx emissions: 1st quarter – 531 lb., 2nd quarter - 531 lb., 3rd quarter - 531 lb., and fourth quarter – 531 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions to offset PM10 requirements: 1st quarter – 559 lb., 2nd quarter - 559 lb., 3rd quarter - 559 lb., and fourth quarter – 559 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 and 4.13.3 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- ERC Certificate Numbers S-3208-2(NOX), S-3737-1 (VOC), and S-3154-5(SOX) (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter – 1,643 lb., 2nd quarter – 1,643 lb., 3rd quarter – 1,643 lb., and fourth quarter – 1,643 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of SOx emissions: 1st quarter – 390 lb., 2nd quarter - 390 lb., 3rd quarter - 390 lb., and fourth quarter – 390 lb. These amounts include the applicable offset ratio

specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions to offset PM10 requirements: 1st quarter – 411 lb., 2nd quarter - 411 lb., 3rd quarter - 411 lb., and fourth quarter – 411 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 and 4.13.3 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- ERC Certificate Numbers S-3208-2(NOX), S-3737-1 (VOC), and S-3154-5(SOX) (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

Health Risk Impacts (d)

Conclusion: The Project would not expose sensitive receptors to substantial pollutant concentrations.

Discussion: Under the Clean Air Act, toxic air contaminants (TACs) are airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health. Potential health impacts from TACs include long-term health effects such as cancer, birth defects, neurological damage, or genetic damage; or short-term effects such as eye watering, respiratory irritation, throat pain and headaches. TACs may also be referred to as hazardous air pollutants (HAPs). There are currently more than nine hundred (900) substances classified by the US EPA and California Air Resources Board (CARB) as TACs. Air Quality problems occur when sources of TACs and sensitive receptors are located in proximity to one another.

TACs can be separated into carcinogens and non-carcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is expressed as excess cancer cases per one million exposed individuals.

Non-carcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact would occur. These levels are determined on a pollutant-by-pollutant basis. Acute and chronic exposure to non-carcinogens is expressed by using a Hazard Index, which is the ratio of expected exposure levels to acceptable health-acceptable exposure levels.

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987, and requires stationary sources to report the type and quantities of certain substances routinely released into the air. The goals of AB 2588 are to collect emission data, to identify facilities having localized impacts, to ascertain risks to acceptable levels. AB 2588 requires air districts to establish the prioritization score threshold at which facilities are required to prepare a health risk assessment (HRA).
In establishing priorities, an air district must consider potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the district determines may indicate that the facility may pose a significant risk.

In implementing its responsibilities under AB 2588, the District Governing Board adopted notification procedures, including prioritization score thresholds, for notifying the public of significant carcinogenic and non-carcinogenic health risks. The District concludes that use of the existing prioritization score thresholds to establish thresholds of significance under CCR §15064.7 is an appropriate and effective means of promoting consistency in significance determinations within the environmental review process. The District's thresholds of significance for determining whether project emissions would expose sensitive receptors to substantial pollutant concentrations are:

- Carcinogens: Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds ten (10) in one million.

- Non-Carcinogens: Ground Level concentrations of non-carcinogenic TACs would result in a Hazard Index greater than one (1) for the MEI.

An HRA is not required for a project with a prioritization score of less than one (1). Potentially hazardous materials are not expected to be associated with the steam generator sites. The District performed a HRA to determine possible health impacts from the Project's permitted stationary source emissions on the nearest sensitive receptors. The HRA demonstrates that for each unit, the acute and chronic hazard indices are both below one (1.0) and the maximum individual cancer exposure risk associated with each unit is less than the 1 in a million threshold. Specific conditions will be placed into the permit to ensure that human health risks will not exceed the District allowable levels. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the project would expose sensitive receptors to significant health risks.

Mitigation: None required.

Odor Impacts (e)

Conclusion: The Project would not create objectionable odor affecting a substantial number of people.

Discussion: While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the District. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there is no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Rather, projects must be assessed on a case-by-case basis.

Diesel exhaust from construction activities may generate odors. However, construction emissions are temporary in nature and, due to the distance from the nearest sensitive receptor (approximately 3300 feet) the project is not expected to affect a substantial number of people.

The District's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) defines a significant odor impact as either more than one (1) confirmed complaint per year averaged over a three (3) year period or two (2) unconfirmed complaints per year averaged over a three (3) year period. A review of the District's compliant database revealed no received odor complaints against the Chevron USA Kern River Oilfield. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the project would create objectionable odors affecting a substantial number of people.

Mitigation: None required.

References

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Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

San Joaquin Valley Unified Air Pollution Control District. October 2014. *Draft Authority to Construct: Application Review,* Applicant Number S-1131, Project Number S-1140568. Available at San Joaquin Valley Air Pollution Control District. 34946 Flyover Court, Bakersfield, CA 93308-9725.

San Joaquin Valley Unified Air Pollution Control District. January 2002. *Guide for Assessing and Mitigating Air Quality Impacts.* Website: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf.

San Joaquin Valley Unified Air Pollution Control District. October 2014. *Risk Management Review. Chevron USA Project # S-1140568.* Available at San Joaquin Valley Air Pollution Control District. 1990 East Gettysburg Avenue, Fresno, CA 93726.

IV. Biological Resources Would the Project:		**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or 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?				✓

IV. BIOLOGICAL RESOURCES

Candidate, Sensitive and Special Status Species (a)

Conclusion: The Project, with incorporation of mitigation measures will have a less than significant impact on candidate, sensitive, or special status species.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

Construction activities associated with the Project will include: simple grading of the area, a concrete foundation for each steam generator unit, worker commutes and installation of five 85.0 MMBtu/hr steam generators. The majority of new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal amount will be installed underground to support operational activities. The Project will be implemented utilizing existing roads and therefore, no new roads will be constructed. Also, an existing 62.5 MMBtu/hr steam generator will simply be relocated to one of the locations identified within Table 1. Project construction activities have the potential to result in injury, mortality, harassment, and/or displacement of special statues species and degradation of their habitat. In general, as the intensity and scale of construction increases, the potential to affect special status species and their habitats correspondingly increases. Although it's important to note, construction activities for this Project are minimal in nature and are not expected to increase at an extremely rapid capacity. Project operational activities typically involve maintenance activities, oil and gas production and minimal vehicle travel within the Project site. The following operational activities have the potential to directly or indirectly impact sensitive or special status species:

1. Operation and maintenance of oil and gas operations-related equipment.
2. Use, storage, transportation, and management of chemicals related to oil and gas operations.
3. Road maintenance.
4. Travel on existing roadways.
5. Vegetation, mowing and clearing for maintenance purposes.

Although the types of direct and indirect impacts would be similar to the impacts of construction-related activities described above, the intensity of the impact and area of effect would be less because most activities associated with operations are expected to occur in previously disturbed areas (i.e. – travel on existing roadways, existing road maintenance, routine operation and maintenance of oil and gas operations-related equipment.)

To minimize impacts during construction and operations of the Project on candidate, sensitive and special status species, Chevron USA has precautionary measures in place to avoid 'take" of threatened and endangered species on property due to construction and operational activities ongoing by Chevron. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct of endangered species. "Take" includes the modification or degradation of habitat that could result in death or injury to listed species through the interference of behavioral patterns of those species. The precautionary measures in place include the requirement of a biological survey to determine the presence or absence of candidate, sensitive, and special status species identified prior to all ground-disturbing activities.

Chevron USA maintains a practice of take avoidance for all species that are listed as threatened and/or endangered under *California Endangered Species Act* (CESA) and *Federal Endangered Species Act* (FESA). Under this practice, Chevron USA performs pre-activity biological surveys through the Chevron Certified Biological Representative Program and by using qualified biological consultants for any proposed Project activity requiring ground disturbance in previously undisturbed areas. Chevron USA complies with all U.S. Fish and Wildlife (USFWS); and/or California Department of Fish and Wildlife (CDFW) recommendations for assessment, analysis, and protection of biological resources. With precautionary measures in place and implementation of the Chevron Certified Biological Representative Program, it is reasonable to conclude the Project would not result in direct or indirect impacts to threatened or endangered species. In addition to implementation of the Chevron Certified Biological Representative Program, Chevron USA has incorporated mitigation measures to ensure potential impacts on biological resources are mitigated to less than significant.

Mitigation: To ensure the Project would not have a significant impact on candidate, sensitive and special status species and to ensure compliance with existing U.S. Fish and Wildlife Service (USFWS), the following mitigation measures will be made conditions of Project approval:

- **BIO-1** – A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-2** – During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-3** – A biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-4** – Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all Project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-5** – During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-6** – All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-7** – All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-8** – No firearms shall be allowed on the Project sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-9** – No pets, such as dogs or cats, shall be permitted on the Project sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-10** – Use of rodenticides and herbicides in the Project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-11** – Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-12** – An employee education program shall be conducted for any Project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-13** – Upon completion of the Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-14** – In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-15** – Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden. Contact information for CDFW and USFWS is provided below in Measure BIO-17: [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-16** – The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. 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. Contact information is provided below. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

  CDFW: Ms. Reagen O'Leary, Environmental Scientist
  1234 E. Shaw Avenue
  Fresno, CA 93710
  Phone: (559) 243-4014

  CDFW: Mr. Paul Hoffman, Wildlife Biologist
  1701 Nimbus Road, Suite A
  Rancho Cordova, CA 95670
  (530) 934-9309

USFWS: Chief of the Division of Endangered Species
2800 Cottage Way, Suite W2605
Sacramento, CA 95825-1846
(916) 414-6620 or (916) 414-6600.

- **BIO-17** – New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-18** – If habitat for, and/or the presence of sensitive species are documented in the pre-construction surveys, additional focused biological surveys will be conducted by a Qualified Wildlife Biologist for the appropriate survey periods as identified in the CDFW and USFWS protocols identified below. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

    - Blunt-nosed leopard lizard – Approved Survey Methodology for the Blunt-nosed Leopard Lizard (CDFG, 2004)
    - San Joaquin kit fox – Standardized Recommendation for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance (USFWS, 2011)
    - Burrowing owl – Staff Report on Burrowing Owl Mitigation dated March 7, 2012 (CDFG, 2012)

- **BIO-19** – Permittee shall retain at least one staff or contractor representative that has successfully completed the applicant's Biological Awareness training program on-site during all ground disturbing activities and Project construction. In the event that special status species are discovered on or near the Project site, said staff/contractor shall immediately contact the Company's biological representative identified in the biological training. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-20** - Blunt-nosed leopard lizard surveys following current CDFG guidelines shall be completed no more than one year prior to initiation of Project if construction activities will impact potential habitat for the species. Potential habitat includes areas that have not been previously disturbed or that have recovered to support vegetation and small mammal burrows that represent potential shelter for blunt-nosed leopard lizard. If at any time blunt-nosed leopard lizards are observed during these surveys, no disturbance of areas that could be occupied by this species should occur within 500 feet of the observation without prior approval from CDFG and USFWS. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-21** - The limits of Project site grading shall be clearly delineated prior to construction activities by posting stakes, flags and/or rope or cord, as necessary. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-22** - Traffic restraints and signs shall be established and issued to minimize temporary disturbances. All Project-related vehicle traffic shall be restricted to established roads, designated access roads and routes, Project site, storage areas, and staging and parking areas. Off-road traffic outside designated Project boundaries shall be prohibited. All equipment storage and parking during Project activities shall be confined to the designated construction area or to previously disturbed offsite areas that are not habitat for listed species. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **BIO-23** - Traffic restraints and signs shall be established and issued to minimize temporary disturbances. All Project-related vehicle traffic shall be restricted to established roads, designated access roads and routes, Project site, storage areas, and staging and parking areas. Off-road traffic outside designated Project boundaries shall be prohibited.

  All equipment storage and parking during Project activities shall be confined to the designated construction area or to previously disturbed offsite areas that are not habitat for listed species. If vegetation clearing is conducted between February and mid-September, a survey targeting identification of nesting birds shall be conducted. This survey may be conducted in conjunction with the pre-activity survey. If any nesting birds covered by the Migratory Bird Treaty Act are identified, nests shall be avoided by an appropriate distance such that nesting activities are not interrupted until the young have fledged. Determination of when young have fledged from active nests will be determined by a qualified biologist. If any nesting birds are found during vegetation clearing activities, a qualified biologist shall be contacted to determine appropriate avoidance measures. If any burrowing owl burrows are observed, avoidance measures should be consistent with those included in "Staff Report on Burrowing Owl Mitigation," CDFG (2012) taking into account existing disturbances such as roads and structures. Absolutely no disturbance to active nests shall occur without a permit pursuant to the Migratory Bird Treaty Act. For nesting sites, based on the level of disturbance, the following buffer distances shall apply and be adequately delineated around active nests.

  - April 1 – Aug 15: low disturbance, 200 meters; medium disturbance, 500 m; and high disturbance, 500 m.
  - Aug 16 – Oct 15: low disturbance, 200 meters; medium disturbance, 200 m; and high disturbance, 500 m.
  - Oct 16 – Mar 31: low disturbance, 50 meters; medium disturbance, 100 m; and high disturbance, 500 m.

- All power poles and electrical facilities should be designed to minimize the potential for electrocution of migratory and resident birds, including consideration of birds with a wingspan of up to 9 feet.

- **BIO-24** - To reduce potential impacts to the San Joaquin kit fox, Permittee shall implement the following avoidance measures:

  - For San Joaquin kit fox dens within 200 feet of the construction area, avoidance zones shall be identified by wooden or metal stakes connected by flagging or by other similar fencing material. Each avoidance zone shall have the following distance measured outward from the den or burrow entrances or the edge of the plant population.

    - Potential den:50 ft
    - Atypical den: 50 ft
    - Known den: 100 ft
    - Natal/pupping den (occupied and unoccupied): Contact CDFW
    - San Joaquin antelope squirrel: 50 ft

  - Potential kit fox dens shall be monitored until they can be shown to be unoccupied based on the procedures outlined in Standardized Recommendation for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance (USFWS, 2011), and then covered with plywood that is firmly secured to prevent access by kit foxes during Project activities. The covers shall not be installed more than 14 days prior to the start of construction. The covers shall remain in place for the duration of construction, after which time they shall be removed.

  - If avoidance of any potential kit fox den within the Project site is not practicable, and the den may be unavoidably damaged or destroyed by Project actions, the following procedure shall be implemented: Prior to surface-disturbing activities, any such potential kit fox den shall be completely excavated and then backfilled to preclude later use by kit foxes during the construction period. If, at any time during monitoring or excavation, any sign that the den may be or has been occupied is found, the den's status changes to "known".

  - Potential kit fox dens may be excavated provided that the following conditions are satisfied: (1) the den classification is determined by a qualified wildlife biologist; and (2) the excavation is conducted by or under the direct supervision of a qualified wildlife biologist.

- **BIO-25** - To reduce potential impacts to the San Joaquin kit fox, antelope squirrel and giant kangaroo rat, Permittee shall implement the following avoidance measures:

- If dens or nest burrows are located outside of the construction area but within the avoidance zone designated for the resource type (listed above), the boundary of the avoidance zone shall be drawn to include all areas within the radius stated above, except those falling within the construction area. If the construction area encroaches on an avoidance area, potential dens shall not be excavated unless a qualified biologist determines that excavation is absolutely necessary.

- Avoidance zones shall be maintained until all construction activities have been completed, and then shall be removed by a qualified biologist.

- Dens identified by a qualified biologist as either a "known" den or as a "suspected" pupping den shall not be excavated unless the appropriate California Endangered Species Act (CESA) and Federal Endangered Species Act permits authorized such excavations. In addition, any occupied natal or pupping dens cannot be destroyed until the pups and adults have vacated.

- **BIO-26** - To reduce potential impacts to Nelson's antelope squirrel and the giant kangaroo rat, Permittee shall implement the following avoidance measures:

  - For burrows within 200 feet of the construction area, avoidance zones shall be identified by wooden or metal stakes connected by flagging or by other similar fencing material. Each avoidance zone shall be a minimum of 50 ft outward from the den or burrow entrances or the edge of the plant population.

  - If burrows cannot be avoided, no Project activities shall occur until the appropriate CESA permit has been issued by CDFW. The following measures are required to minimize and mitigate for impacts to antelope squirrel and the giant kangaroo rat:

  - Burrows will be avoided to the maximum extent practicable.

  - If occupied burrows cannot be avoided, a trapping effort will be conducted by a properly permitted wildlife biologist for the purpose of either relocation or holding and releasing individuals back into temporarily disturbed portions of the Project site.

  - CDFW will be provided with a notification at least 30 days prior to trapping and relocation with a plan that includes at least the following information: 1) approximate number of San Joaquin antelope squirrels to be affected; 2) previous experience of the wildlife biologist conducting the trapping and relocation; 3) description of trapping effort; 4) description of relocation plans; 5) whether individuals will be temporarily held for release; 6) off-site release

locations; 7) artificial burrow placement; and 8) proposed results reporting schedule. If CDFG does not respond within 30 days of receiving the notification, trapping and relocation will proceed as stated in the notification. San Joaquin antelope squirrels should not be relocated greater than 500 feet from capture location without prior approval from CDFW.

Riparian Habitats, Sensitive Natural Communities and Wetlands (b, c)

Conclusion: The Project will have a less than significant impact on riparian habitats, sensitive natural communities or federally protected wetlands.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

Riparian habitats are rare on a regional scale due to the significant land use conversion and development in the San Joaquin Valley. The riparian areas within the oilfield boundary are the Fremont Cottonwood Forest and Great Valley Willow Scrub, which occur along the Kern River and the Kern River Flood Control Chanel.

The Fremont Cottonwood Forest is typically dominated by Fremont cottonwood (*Populus fremontii*), Goodding's black willow (*Salix gooddingii*), and other willows in the tree layer. Large shrubs may include button willow (*Cephalanthus occidentalis*), blue elderberry (*Sambucus mexicana*), and mule fat (*Baccharis salicifolia*). The understory often includes wild rye (*Elymus triticoides*) and stinging nettle (*Urtica dioica* ssp. *holosericea*), with wetter sites having some freshwater marsh species in the understory. Drier sites typically include species common in Annual Brome Grassland that are discussed above. Raptors such as white-tailed kite (*Elanus leucurus*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk, use large trees of the Great Valley cottonwood riparian forest to nest. Numerous smaller birds also nest and forage in riparian communities, including warblers, orioles, grosbeaks and sparrows. Reptiles and amphibians associated with San Joaquin Valley riparian communities include western pond turtles (*Actinemys marmorata*), garter snake (*Thamnophis* sp.), Pacific tree frog (*Pseudacris regilla*), and western spadefoot (*Spea hammondii*). The community is present along the Kern River in the southern area of the Kern River Oilfield, and covers approximately 75 acres. However, the oilfield site contains approximately 48 acres of this community.

Great Valley Willow Scrub is similar to Fremont Cottonwood Forest, but is dominated by willow species and typically has a lower diversity of shrub species. Some inclusions of Great Valley Willow Scrub occur interspersed within the Fremont Cottonwood Forest along the Kern River in the oilfield.

The Project site is not located near the Kern River. Therefore, Project construction activities will not directly and indirectly impact Fremont Cottonwood Forest and Great Valley Willow Scrub since they are predominantly located along the Kern River. Given the nature of the activities that would occur during Project operations, no impacts are anticipated on riparian habitats. Project operations consist of: maintenance of equipment, oil and gas production activities, minimal vehicle travel and would occur in already disturbed and developed areas where these sensitive communities would not be present. However, in order to minimize and potential impacts that may occur, Chevron USA has implemented best management practices (BMPs) to minimize any potential impacts to riparian habitat or other sensitive natural community. BMPs implemented by Chevron USA will include, but not limited to the following:

- *Management Practices:* Oil and gas operators and their contractors shall adhere to practices which conform to environmental protections for preserving the landscape of the Chevron Oilfields. Many provisions for environmental protection are established in existing regulations in California Code of Regulations (CCR), Title 14, Division 2, Chapter 4, Subchapter 2, entitled "Environmental Protection and Other State and Federal Regulations."

- *Sumps:* Sumps for the collection of waste water or oil shall not be placed in natural drainage channels. Contingency catch basins may be placed in these locations provided they are evacuated and cleaned after use. Sumps, except operations sumps, shall be constructed and maintained so as not to be hazard to wildlife with enclosures and covers of sufficient strength to prevent wildlife entry and of a mesh size not greater than two inches. Sumps shall be closed in accordance with guidelines established with DOGGR requirements (CCR 170, 1776, and 1778).

- *Channels:* Open, unlined channels and ditches shall not be used to transport waste water (CCR Section 1771).

- *Tank Settings:* Provisions for containment of spilled fluids from tank facilities shall conform to DOGGR requirements for spill prevention and control (CCR Section 1773).

- *Well Cellars:* Well cellars shall be covered and kept drained. Grating or flooring shall be maintained to prevent wildlife entry (CCR Section 1774).

- *Production Facilities:* Production facilities, including tanks, pipes, wellheads, and separators shall not have excessive leakage (CCR Section 1774).

- *Spills:* Leaks and spills which occur shall be promptly repaired and cleaned up (CCR Section 1722).

- *Oil Field Waste and Refuse:* Oil field wastes, including oil, water, chemicals, mud, and cement shall be disposed in a manner so as not to cause damage to wildlife or plants and in accordance with State and local regulations. Idle equipment, scrap, trash, or other oil field materials shall not be disposed of or stored in a disorganized manner or create a hazard (CCR Section 1774). Trash receptacles shall be covered in a manner that prohibits access by animals.

- *Well and Facility Restoration*: Upon well abandonment, holes and cellars shall be removed or filled with earth, and cleared of equipment and trash. Unstable slopes shall be corrected where collapse would result in severe erosion or safety hazard (CCR Section 1776). Unless considered necessary for safety or cleanup reasons, buried flowlines will be left in place. Aboveground lines will be removed. Roads no longer needed for access will not be used following abandonment. The discontinuance of use will allow natural revegetation.

- *Wildlife Awareness Education:* Operators shall provide training to workers to educate them on issues of working around special status species. Awareness training materials (developed by Chevron in consultation with Qualified Biologists) will be provided to workers to educate them on issues of working around sensitive plants and animals. Awareness training materials shall be updated at a frequency not to exceed every 2 years to ensure material reflects current biological information.

- *Herbicides and Pesticides:* Herbicide and pesticide chemicals shall be used only in accordance with existing law, according to manufacturer's instructions and the Kern County Bulletin produced by the California Department of Pesticide Regulation. Herbicide use is limited to existing facility footprints for fire prevention purposes around such facilities as pumping units, power poles, and electrical combustion equipment.

- *Firearms:* Operators shall establish policies prohibiting the use of firearms on oil and gas properties.

- *Vehicle Speed Limits:* Vehicle speed shall be limited to 20 miles per hour on oilfield unpaved roadways.

- *Producing Well Pads:* The size of producing well pads shall be allowed to naturally restore to a smaller working area after the larger area initially graded to drill the well is no longer needed.

- *New Facility Construction:* New construction shall be designed and implemented to minimize surface site disturbance to the extent practicable to maintain site safety and operation. Construction shall utilize existing disturbed sites and/or facilities wherever practicable.

- *Erosion Control Measures:* Standard erosion control measures shall be implemented, as necessary.

- *Off-Road Travel:* Vehicle travel for operation and maintenance purposes shall be limited to existing roadways whenever feasible. Construction of new roads shall be avoided if existing roads can be used.

- *Drainage Washes:* New wells and facilities shall be constructed at least 50 feet from the banks of U.S. Geological Survey topographic defined blue line drainage washes where feasible. Construction of new wells and facilities in proximity to streams must independently comply with Section 404 of the Clean Water Act and CFGC sections 100 et seq.

- *Pipeline Covers:* Pipe stored on site shall have their ends covered prior to use. The ends of pipes stored on site will have ends capped before or immediately after off-loading. In all cases, pipes shall be inspected for presence of wildlife before moving or use. If a special status species has taken occupancy in a section of pipe, a Qualified Biologist shall remove it prior to the pipe being used.

- *Escape Ramps:* Wildlife escape ramps, sized and sited for special status species found in the vicinity of the work site shall be installed after any trench is dug that cannot be covered and must remain open overnight. While work is occurring in the vicinity, monitors will check for animal presence daily before work begins and at the end of the work day.

- *Biological Monitors*: If necessary, to oversee the implementation of these avoidance measures, qualified and trained biological monitors may need to be present at construction sites during surface disturbance activities within areas defined as habitat for special status species, and for time periods necessary to help implement species protection measures.

    - Biological monitors may be either a Qualified Biologist or a CBR.

    - Activities for which the presence of a biological monitor may be necessary include: flagging (necessary to determine a pipeline route or centerline), topsoil segregation, trenching, cleanup of accidental releases of oil and/or water, and other activities as determined by the biological monitor.

    - A Qualified Biologist is required for the removal of entrapped wildlife from a pipeline trench, as well as den and burrow excavations.

    - Each individual working in Chevron's operational areas (whether employees, business partners, agency representatives or biological monitors) is granted the authority by Chevron policy to suspend any proposed project activity that is not carried out in a safe or environmentally

sound manner. Additionally, Chevron employees and contractors have the responsibility to suspend any activity that is not carried out in a safe and environmentally sound manner.

- To the extent possible, biological monitors shall be readily available during all construction periods when not actually present on construction sites.

- *Avian Protective Measures:* It is against Federal and State law to "take" nesting birds, their eggs, or young (MBTA [16 United States Code], CFGC Section 3503). The only exceptions are European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), and rock doves (*Columba livia*). Take includes killing the birds directly, and/or destroying, moving or disturbing a nest with eggs or young present (thereby resulting in the death of young from abandonment or exposure). It is only necessary to stop work in an active nesting area if it is not possible to perform the work in a manner that will protect the nesting birds.

  - Active nests in idled equipment that need to be relocated or restarted cannot be disturbed until the young have fledged (flown from the nest).

  - Tasks that can be performed around an active nest without scaring off the adult(s) tending the nest can proceed.

  - Tasks that cause the adult(s) tending the nest to fly off must be performed in short intervals. Short intervals are no more than 1 hour or so at a time, followed by several hours of non-disturbance. A biological monitor should be present during the work.

  - If a nest must be removed, work must be postponed until the young have fledged (flown from the nest). For most small birds, it is approximately 4 weeks from egg laying to fledging.

- *Adaptive Management:*. As part of adaptive management, Chevron will implement further measures developed in consultation with the USFWS and CDFW as a result of information collected through compliance and effectiveness monitoring.

Based on the above, the District concludes that the Project would have a less than significant impact on riparian habitat or other sensitive natural communities.

Mitigation: None required.

Migratory Corridors (d)

Conclusion: The Project is expected to have a less than significant impact on the movement of migratory wildlife.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

The traditional pattern of development in oil and gas production results in patches of disturbance. The Project includes minimal construction activities that will result in ground disturbance, some vegetation between existing stationary sources equipment and facilities will be left undisturbed and additional vegetation is allowed to recover in areas not continuously disturbed. When vegetation is allowed to recover, many of the native wildlife species recolonize areas between stationary sources from patches of habitat that were not part of the initial ground disturbance. In contrast, agricultural areas are purposely disturbed in large, regular shaped blocks with little to no natural vegetation. This pattern of development leaves little opportunity for burrowing animals to persist or recolonize. As such, the small area and dispersed distribution of the Project are expected to add minimal increase to much more extensive, impassible, and permanent barriers that already exist. The Project would result in no native resident or migratory fish species and it would not impede or adversely affect the use of any native wildlife nursery sites. Based on the above, the District concludes that construction and operational impacts regarding the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors associated with the Project would be less than significant.

Mitigation: None required.

Policies, Ordinances and Conservation Plans (e-f)

Conclusion: The Project will have no impact and therefore, not conflict with local policies or ordinances protecting biological resources or any provision of adopted federal, state, regional, or local conservation plans.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

The Kern River Oilfield overlaps satellite areas identified in the U.S. Fish and Wildlife Service (USFWS) Recovery Plan for Upland Species of the San Joaquin Valley, which outlined conservation and recovery objectives for certain species listed under the Federal Endangered Species Act (FESA). There is a relatively high level of existing disturbance from oil and gas development in production areas of the oilfield. Similarly, the Project sites do not contain any significant blocks of natural lands that would provide contiguous high-quality habitat for any of the species addressed in the Recovery Plan.

The Project will be consistent with the Recovery Plan goals and ecosystem-level strategy. Furthermore, Chevron USA is currently developing the Lokern Habitat Conservation Plan (HCP) to address current and future oil and gas exploration in the southern San Joaquin Valley. This plan is designated to achieve the permanent protection of up to 11,789 acres within the 13,333 acres owned by Chevron USA in the Lokern Natural Area in western Kern County, while allowing Chevron USA to engage in specific activities associated with oil and gas development. Also, avoidance and minimization measures in the Lokern HCP address the Lokern HCP covered species and specific recovery criteria where necessary to avoid precluding recovery objectives. Therefore disturbance of the Project site is not expected to impede or preclude implementation of the above referenced plans.

The Kern County General Plan Code 1.10.10 describes the protection of oak woodlands and large individual oaks. Oak woodlands are defined as development parcels characterized by canopy cover by oak trees at least 10 percent, as determined from base line aerial photography, or by site survey performed by a licensed or certified arborist or botanist. There are no oak woodlands or large individual oak trees within the Project site as the Kern River Oilfield has been operated for oil and gas production for many years.

Kern County has prepared and adopted a Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) which covers the oilfield. The overall goal of the MBHCP is to assist urban development applicants in complying with Federal and State endangered species regulations. However, the MBHCP does not address oil and gas activities. Overall, the Project is consistent with the objectives in the Recovery Plan and Lokern HCP which encourages protection of sensitive species. Therefore no impacts would result from the Project and it will not conflict with regional conservation efforts in the Recovery Plan that protects biological resources from Project activities.

Mitigation: None required.

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V. Cultural Resources Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		✓		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

V. CULTURAL RESOURCES

Historical Resources (a)

Conclusion: The Project will have a less than significant impact on historical resources.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is within the existing boundaries of the Kern River Oilfield. The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. Chevron USA has conducted a Cultural Resources Assessment and Historic Sites and Architectural Resources Analysis Technical Report for the Kern River Oilfield to identify impacts associated with historical resources. The Cultural Resources Assessment and Historical Sites and Architectural Resources Analysis Technical Report indicate that the Kern River Oilfield has moderate (neither high nor low) sensitivity for historical architectural and archaeological resources. The moderate sensitivity rank for historical-age resources reflects the fact that reports have identified thirteen (13) historical-age features and structures within the Oilfield. Three of which are registered as either California State Landmarks or Points of Historical Interests. These historic sites include: Gordon's Ferry on the Kern River (Landmark #37), Kern River Oil Discovery Well (Landmark #260), and Union Ice Company Plant Number 6 (Point of Historical Interest). As such, the Kern River Oilfield contains numerous historical-age architectural resources, at least three of which are of historical significance, leading to a ranking of moderate sensitivity for historical resources.

Within the most active operating portions of the Kern River Oilfield, surveys are unlikely to reveal any further significant historical-age resources because the oilfield's profound prior disturbance from oil and gas development. Nevertheless, some remnants of the early historical occupation of the field may remain, possibly buried, in places.

Chevron USA has conducted assessments to measure the potential for prehistoric resources within the Kern River Oilfield. Results of the assessment, found two prehistoric sites that include: a habitation site with burials, and a mound site. These two sites likely represent the general location of the ethnohistorically documented *Yokuts Village of Tsineuhiu*. Remnants of the village occupation may yet be preserved in less disturbed areas and areas under fill. It's important to note, these prehistoric sites are located adjacent to the Kern River, along small creeks and tributaries. However, for this Project, the sites are located within the Kern River Oilfield, but not near the Kern River. As such, a surface survey is unlikely to reveal significant new prehistoric resources as the likelihood of discovering new prehistoric resources is moderate to low. Furthermore, the Kern River Oil Field has relatively low sensitivity for buried cultural resources. Therefore, the District concludes that the Project would have a less than significant impact on historical resources.

Mitigation: None required.

Archaeological, Paleontological Resources and Human Remains (b,c,d)

Conclusion: The Project will have a less than significant impact with mitigation on human remains, archaeological and paleontological resources.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil. The Project is within the existing boundaries of the Kern River Oilfield. The Project will be located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. Construction activities associated with the Project consist of simple grading of the area, concrete foundations for each steam generator unit, worker commutes, and installation of five 85.0 MMBtu/hr steam generators. Upon installation of the steam generators, new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal will be installed underground to support operational activities. The additional 62.5 MMBtu/hr steam generator will simply be transported to one of the locations identified within Table 1. No ground drilling is involved with the Project. Minimal ground disturbance activities are expected and, although it's highly unlikely, there could be a potential to disturb human remains, archeological and paleontological resources.

To minimize any potential impacts on human remains, archaeological and paleontological resources during construction related activities, Chevron USA will review the location to determine if there are any potential impacted archaeological and/or paleontological resources such as abandoned structures, grave sites, or fossil beds. Standard protocol in compliance with existing regulations would require that, in the event that archaeological and/or paleontological resources, including human remains are discovered during surface surveys, digging, scraping, or other construction activities, all work within 100 feet shall be ceased until the significance and extent of the find can be recovered by a qualified archaeologist and/or paleontologist for study. Mitigation measures have been incorporated into the Project to address the possibility that archaeological and/or paleontological, or human remains might be unearthed during any Project related ground disturbance activities. Therefore, the District concludes that with the mitigations presented below, the Project would have a less than significant impact on archaeological resources, paleontological resources, or human remains.

Mitigation:

- **CUL-1** – In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the

significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

- **CUL-2** – In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]

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VI. Geology / Soils Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓

VI. GEOLOGY/SOILS

Seismic Activity and Geological Stability (a, c, d)

Conclusion: The Project will not have a substantial effect on exposing people or structures to potential risks of loss, injury, or death resulting from strong seismic activity, unstable or expansive soils, and ground failure.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is within the existing boundaries of the Kern River Oilfield. The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project is not located within an Alquist-Priolo Earthquake Fault Zone, as published by the California Department of Conservation, and is located more than five miles from the nearest known active fault trace. According to the Kern County General Plan Element, the nearest active earthquake fault to the Kern River Oilfield is the White Wolf Fault and Kern Canyon Fault. Both faults are located several miles from the Kern River Oilfield.

According to the Safety Element of the Kern County General Plan, Kern County is susceptible to moderate-to-extreme ground shaking, as well as small landsides in mountainous areas of the county. The Project is located on flat terrain away from any mountains and is not expected to experience any landslides; nor is it located within a liquefaction hazard area. The Project is located on Mineral and Petroleum land designated for oil production activities and will be used for such purpose. Per the Kern County General Plan Safety Element, subsidence caused by the extraction of oil and gas is deemed too small to be of serious concern and subject to monitoring and regulation by the California Department of Conservation, Division of Oil, Gas and Geothermal Resources.

The Project sites are consistent with current land use and designed in accordance with all building code requirements including those pertaining to excavations, grading, and foundations. Adherence to California Buildings Standards Code (CBSC) requirements and compliance with California seismic design requirements would ensure that the Project would not expose persons or property to substantial risk of loss, injury, or death resulting from seismic activity. The District concludes that there is no substantial evidence of record to support a conclusion that the Project would result in significant risks to life and property as a result of impacts to geologic and soil resources.

Mitigation: None required.

Soil Erosion (b)

Conclusion: The Project will not result in substantial soil erosion or the loss of topsoil, and impacts are less than significant.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figure 2 and 3). The Project is within the existing boundaries of the Kern River Oilfield. The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

The construction of the five steam generators will occur off-site and the additional 62.5 MMbtu/hr steam generator will simply be relocated to its new location. However, once the steam generators are manufactured and assembled offsite, they will be delivered to the Project sites. Construction activities will be minimal in nature and will include simple grading of the area, a concrete foundation for each steam generator unit, worker commutes and installation of five 85.0 MMBtu/hr steam generators. The majority of new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal amount will be installed underground to support operational activities. The steam generators are consistent with the current land use and operations, which has allowed for the production of oil. Any potential impacts to soil erosion will be reduced by compliance with the Kern County Planning and Building Department requirements. Therefore, impacts are considered to be less than significant.

Mitigation: None required.

Soil Capacity for Wastewater (e)

Conclusion: The Project will have no impact on wastewater disposal.

Discussion: The Project will be located within Chevron USA's existing surface boundaries in the Kern River Oil Field which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is within the existing boundaries of the Kern River Oil Field. The Project is located on property currently occupied by Chevron for oil production activities consistent with current and surrounding land uses. The Project does not include or require the use of septic tanks or additional wastewater systems. The Project includes the construction and operation of five steam generator units, in addition to relocating an existing 62.5 MMBtu/hr steam generator unit. The Project sites are equipped with proper drainage consisting of localized drainage swales, drainage swales, dry washes, ephemeral streams and depressions. Therefore, the Project will not impact the soil or its capacity to support potential wastewater disposal.

Mitigation: None required.

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VII. Greenhouse Gas Emissions Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?			✓	

VII. GREENHOUSE GAS EMISSIONS

Greenhouse Gas Emissions (a, b)

Conclusion: Project related greenhouse gas (GHG) emissions will not conflict with any applicable plans or policies to reduce GHG emissions and will have a less than significant impact on global climate change.

Discussion: GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. There are no "attainment" concentration standards established by the Federal or State government for GHGs. In fact, GHGs are not generally thought of as traditional air pollutants because GHGs, and their impacts, are global in nature, while traditional "criteria" air pollutants affect the health of people

and other living things at ground level, in the general region of their release to the atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through natural processes. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere because of human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons. Additional information on GHG and global climate change can be found in the District staff report titled: *Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act.*

Assembly Bill 32 (AB 32)

Assembly Bill 32 (California Global Warming Solutions Act of 2006) is a key piece of California's effort to reduce its GHG emissions. AB 32 was adopted establishing a cap on statewide greenhouse gas emissions and sets forth the regulatory framework to achieve the corresponding reduction in statewide emissions levels. AB 32 requires the CARB to establish regulations designed to reduce California's GHG emissions to 1990 levels by 2020. In executing its legislative mandate under AB 32, the CARB developed a Scoping Plan that contains the main strategies California will use to reduce GHG from Business-as-Usual (BAU) emissions projected from 2020 levels back down to 1990 levels. BAU is the projected emissions caused by growth, without any GHG reduction measures. CARB determined that a 29% reduction from BAU is necessary to achieve the 1990 GHG emissions level. On December 11, 2008, ARB adopted its AB 32 Scoping Plan, setting forth a framework for future regulatory action on how California will achieve the goal of reducing GHG emissions to 1990 levels.

Cap & Trade

The AB 32 Scoping Plan identifies a Cap and Trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. The Cap and Trade program is implemented by the CARB and caps GHG emissions from the industrial, utility, and transportation fuels sectors – which account for roughly 85% of the state's GHG emissions.

The program works by establishing a hard cap on about 85% of total statewide GHG emissions. The cap starts at expected BAU emissions levels in 2012, and declines 2-3% per year through 2020. Fewer and fewer GHG emissions allowances are available each year, requiring covered sources to reduce their emissions or pay increasingly higher prices for those allowances. The cap level is set in 2020 to ensure California complies with AB 32's emission reduction target of returning to 1990 GHG emission levels.

The scope of GHG emission sources subject to Cap and Trade in the first compliance period (2013-2014), includes:

- All electricity generated and imported into California. The first deliverer of electricity into the state is the capped entity (the one that will have to purchase and surrender allowances).
- Large industrial facilities emitting more than 25,000 metric tons of GHG pollution/year. Examples include oil refineries and cement manufacturers.

The scope of GHG emission sources subject to Cap and Trade during the second compliance period (2015-2017), expands to include distributors of transportation fuels (including gasoline and diesel), natural gas, and other fuels. The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station). In total, the Cap and Trade program is expected to include roughly 350 large businesses, representing about 600 facilities. Individuals and small businesses will not be regulated. Under the program, companies do not have individual or facility-specific reduction requirements. Rather, all companies covered by the regulation are required to turn in allowances in an amount equal to their total greenhouse gas emissions during each phase of the program. The program gives companies the flexibility to either trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more will have to turn in more allowances. Companies that can cut their emissions will have to turn in fewer allowances. Furthermore, as the cap declines, total emissions are reduced.

On October 20, 2011, ARB's Board adopted the final Cap and Trade regulation and Resolution 11-32. As part of finalizing the regulation, the Board considered the related environmental analysis and, consistent with CEQA requirements, approved CARB's functionally equivalent document (FED).

CEQA Requirements

In December, 2009, the California Natural Resources Agency (NRA) amended the CEQA Guidelines to include Global Climate Change, which is now generally accepted by the scientific community to be occurring and caused by GHG emissions. The amendments address analysis and mitigation of the potential effects of GHG emissions in CEQA documents. In their *Final Statement of Reasons for Regulatory Action,* NRA recognizes that the analysis of GHG emissions in a CEQA document presents unique challenges to lead agencies. NRA amended section 15064(h)(3) of the CEQA guidelines to add compliance with plans or regulations for the reduction of GHG emissions to the list of plans and programs that may be considered in a cumulative impacts analysis. In their *Final Statement of Reasons for Regulatory Action*, NRA discusses that AB 32 requires CARB to adopt regulations that achieve the maximum technologically feasible and cost effective GHG reductions to reach the adopted state-wide emissions limit. NRA goes on to state that a lead agency may consider whether CARB's GHG reduction regulations satisfy the criteria in existing subdivision (h)(3).

District CEQA Policy

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. On December 17, 2009, the District adopted the policy "*District Policy (APR 2005) – Addressing GHG Emissions Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*" and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. The policy applies to all District permitting projects that have an increase in GHG emissions, regardless of the magnitude of the increase. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change.

As illustrated in Figure 4, the District's board-adopted policy for determining significance of project-specific GHG emissions employs a tiered approach. Of specific relevance to Cap and Trade is the provision that: "Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement [best performance standards] BPS." Projects that do not comply with such a plan or program must incorporate BPS or undergo a project-specific analysis demonstrating that GHG emissions would be reduced by at least 29%, as compared to BAU.

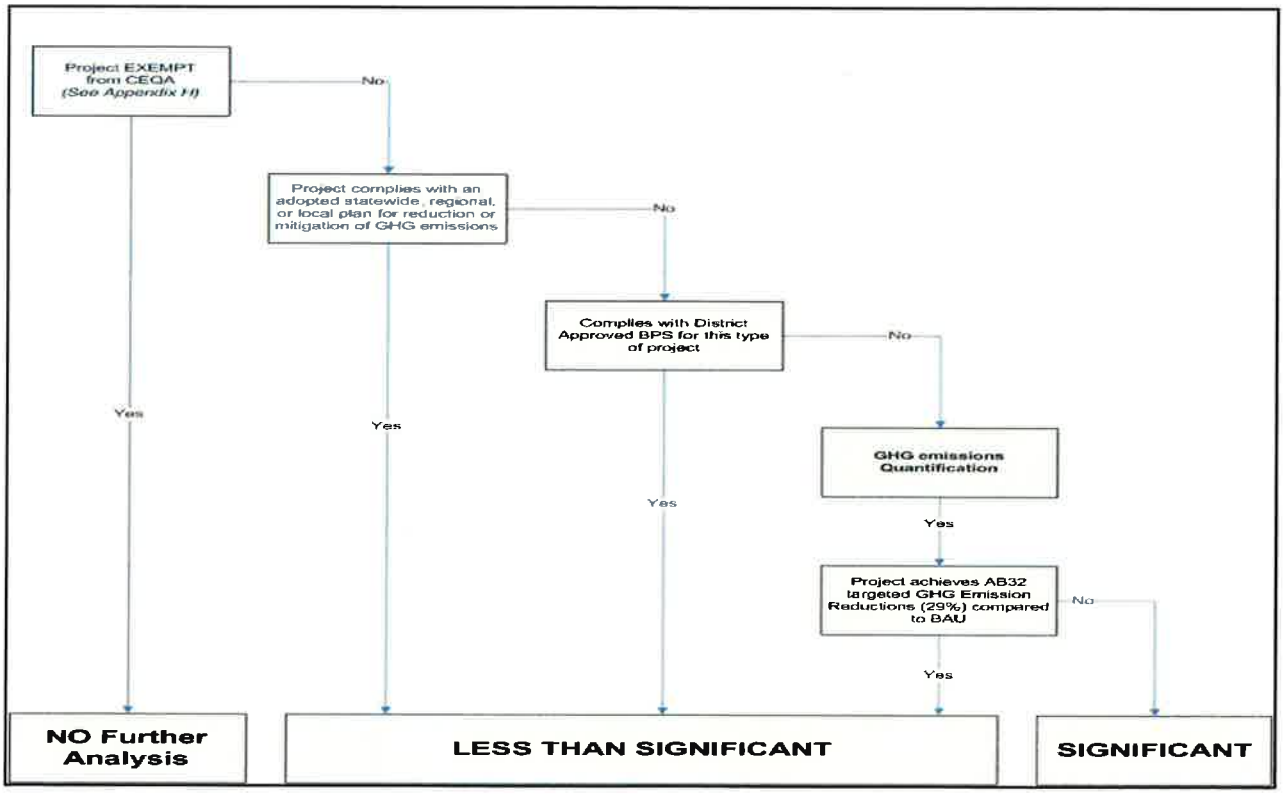
Determination of Significance of GHG Emissions for Projects Subject to an Approved GHG Emissions Reduction Plan

The NRA amended the CEQA Guidelines to include Global Climate Change and added compliance with plans or regulations to reduce GHG emissions to the list of plans and programs that should be considered in a cumulative impacts analysis. In their *Final Statement of Reasons for Regulatory Action*, NRA discusses that AB32 requires the CARB to adopt regulations that achieve the maximum technologically feasible and cost effective GHG reductions to reach the adopted state-wide emissions limit. NRA goes on to state that a lead agency may consider whether CARB's GHG reduction regulations satisfy the criteria in section 15064(h)(3).

The District's board-adopted policy determines that: "Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency."

AB32, and the AB32 scoping plan adopted by CARB, is a GHG reduction plan for CEQA purposes. It is directly and wholly responsible for meeting the GHG reduction targets of the State of California and is supported by an environmental review process that has been successfully defended in court as equivalent to, and compliant with, CEQA requirements. However, there are some sources of GHG emissions that are discussed in the AB32 scoping plan that are not required to mitigate emissions via implementation of the plan, and some of the plan is devoted to implementing regulations that address existing emissions, and will have only minimal impact on increases in emissions. Since it is these increases that must be addressed under CEQA, the District conducts its own analysis to determine whether compliance with AB32 and its scoping plan are adequate to conclude that a particular GHG emissions increase in less than significant.

Figure 4: Determination of Significance for Stationary Source Projects



Determination of Significance of GHG Emissions for Projects Subject to CARB's GHG Cap and Trade Regulation

One regulation proposed in the AB32 scoping plan that does address increases in GHG emissions is the Cap and Trade regulation discussed above. Facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions, and any growth in emissions must be accounted for under that cap, so that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions. It is therefore reasonable to conclude that facilities subject to and in compliance with CARB's Cap and Trade requirements will not, and in fact, cannot, contribute significantly towards any global GHG emissions growth. While this inherent mitigation process is not a necessary component of a finding that compliance with a plan for the reduction of greenhouse gas emissions may be considered in a cumulative impacts analysis [(CCR §15064(h)(3)], the fact that all growth in emissions at covered sources is mitigated provides a certainty that compliance with the Cap and Trade program eliminates any potential for significant impacts from those GHG emissions.

Determination of Significance of GHG Emissions for Projects Implementing BPS

BPS for stationary source projects is – for a specific class and category source of GHG emissions – the most effective, District approved, achieved-in-practice means of reducing or limiting GHG emissions from that source, which is also economically feasible per the definition of achieved-in-practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category, and is developed by the District in a public process that considers and addresses input from all interested parties. Consistent with the District's adopted policy for assessing significance of project-specific GHG emission increases when serving as Lead Agency, projects implementing BPS will be determined to have a less than significant impact on global climate change.

Project Details and Significance Determination

Compliance with an Approved GHG Emission Reduction Plan

Chevron USA is an oil production company that operates oil and gas production facilities within the State of California. As such, its facilities are subject to CARB's Cap and Trade regulation. As discussed above, CARB's Cap and Trade regulation is an adopted statewide plan for reducing or mitigating GHG emissions from targeted industries and is supported by an environmental review process that has been successfully defended in court as equivalent to, and compliant with, CEQA requirements.

Consistent with CCR §15064(h)(3), the District finds that compliance with CARB's Cap and Trade regulation would avoid or substantially lessen the impact of project-specific GHG emissions on global climate change. The District therefore concludes that the project would have a less than significant individual and cumulative impact on global climate change.

Mitigation of GHG Increases under the Cap and Trade Regulation

As outlined above, facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Therefore, it is reasonable to conclude that implementation of the Cap and Trade program would fully mitigate project-specific GHG emissions.

Regardless of, and independent to, the above determination that the project is subject to a state-wide GHG emissions reduction plan, the District finds that, through compliance with the Cap and Trade regulation, Project-specific GHG emissions would be fully mitigated. Thus, the District concludes that the Project would have a less than significant individual and cumulative impact on global climate change.

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VIII. Hazards and Hazardous Materials Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?			✓	
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?			✓	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			✓	

VIII. HAZARDS & HAZARDOUS MATERIALS

Hazardous Materials and Exposure to the Public (a-d)

Conclusion: The Project will not expose the public to hazardous materials, and impacts will have a less than significant impact to no impact.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The areas immediately surrounding the Project are designated "General Agriculture" and zoned oil production as "Exclusive Agriculture" and "Limited Agriculture." The Project is not located on a site that meets the definition of Government Code Section 65962.5, which requires specific hazardous waste facilities to submit required information to the Department of Toxic Substances Control (DTSC). The closes sensitive receptor is a business located approximately 3,330 feet from the Kern River Oilfield. The District has conducted a risk screening analysis indicating that the operation of the steam generators would not pose a significant risk to the nearest receptor. Therefore, the proposed Project will not expose the public to hazardous materials from the transport, use, or disposal of hazardous materials.

As a standard practice and prior to the installation of new equipment or modifications to existing equipment, Chevron USA conducts a thorough hazard analysis. This analysis is a best management practice (BMP) and is in addition to any regulatory requirements Chevron USA is required to comply with. The hazard analysis evaluates the potential impacts and risks to the physical environment, social environment, public health, and existing operations. Should any hazards be present, Chevron USA will engineer safety controls to reduce risk consistent with its currently existing *Chevron Risk Management Process*. In the event hazardous materials are needed or result from the construction or operations of the steam generators, the materials will be handled and disposed of in accordance with Federal, State, and local regulations (such as the Solid Waste Management Act, the Hazardous Materials Transportation Act, and the Hazardous Waste Control Act). Also, the California Department of Industrial Relations Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle, if need be.

As such, impacts resulting from the accidental release of hazardous materials are expected to be less than significant impact on the environment. Therefore, there is no substantial evidence of record to support a conclusion that accidental release of hazardous materials, and the transportation, use, or disposal of hazardous materials would have a significant hazard impact to the public.

Mitigation: None required.

Airports and Airstrips (e, f)

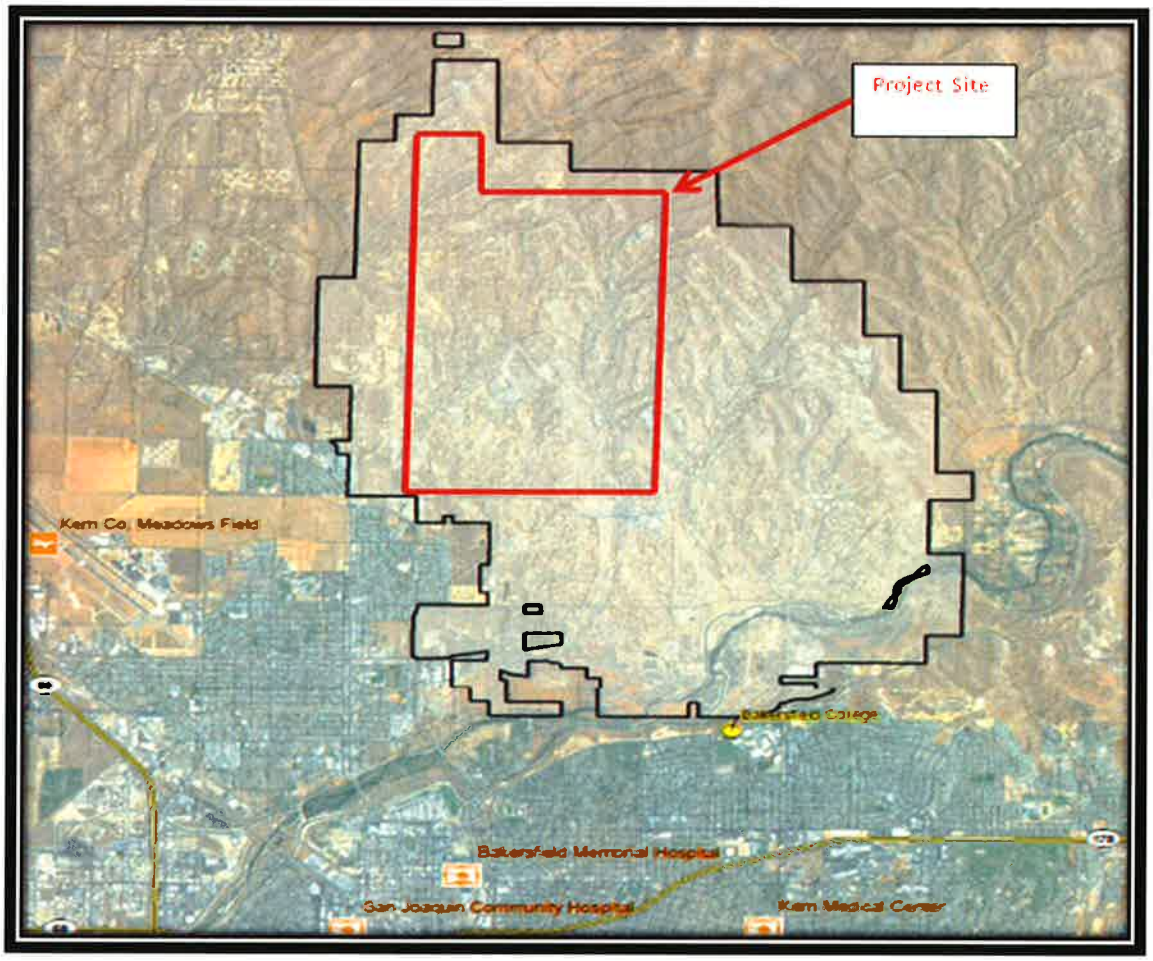
Conclusion: The Project will have a less than significant impact on the safety of people working or residing in the Project area.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. One (1) public airport, one (1) private heliport and one (1) public heliport are located within two (2) miles of the oilfield boundary as listed below in Table 6 and identified in Figure 5.

Table 6: Airports, Airstrips, and Heliports Distance to Proposed Project

Name of Airport/Airstrip/Heliport	Type	Distance
Kern County Meadows Field	Public airport	1.5 miles (west)
Bakersfield Memorial Hospital	Private heliport	1.5 miles (south)
Kern Medical Center	Public heliport	1.9 miles (south)

Figure 5: Location of Airport, Airstrip, and Heliports to Proposed Project Site



The Meadows Field Airport Master Plan was prepared for the Kern County Board of Supervisors and was certified by the Board on June 20, 2006. The Project will not be located within the airport land use plan. The Meadows Field Airport is a county-owned facility that is approximately 1.5 miles west of the oilfield and located in the unincorporated Kern County community of Oildale. It is the largest of seven (7) airports operated by the Kern County Department of Airports. The airport currently provides daily commercial passenger and cargo/freight flights. Airport facilities can be functionally classified into two (2) broad categories: airside and landside. The airside category includes those facilities directly associated with aircraft operations, such as runways, taxiways, airfield lighting, and navigational aids. The landside category includes those facilities necessary to provide a safe transition from surface to air transportation and support aircraft servicing, storage, maintenance, and operational safety. As part of Chevron USA's best management practice (BMP) to minimize safety hazards resulting from the construction area and the proximity to public airports, heliports, Chevron USA will provide written notice of the construction schedule to the Kern County Meadows Field Airport and Kern Medical Center heliport to minimize safety

hazards resulting from the construction activities associated with the Project. For operations, existing Chevron USA personnel will only intermittently be present at the sites for routine maintenance and emergency repair. No residents are located within the proposed Project. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the location of the Project would pose a significant risk to people residing or working in or near the Project area.

Mitigation: None required.

Emergency Response (g)

Conclusion: The Project will not interfere with emergency response.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

The Safety Element within the Kern County General Plan outlines the requirement for a Kern County Emergency Plan. In accordance with the General Plan, the circulation systems surrounding the proposed Project are adequate for emergency access and evacuation. No County or State designated emergency evacuation routes were identified near the Project.

Construction of the Project will be minimal and temporary in nature. Should construction activities span out to a public road causing temporary lane closure, Chevron USA will coordinate with the local jurisdiction so as not to cause closure of a public roadway. Flaggers may briefly hold traffic back for construction equipment, but emergency vehicles would be provided access in the event of a temporary road closure. For operations, since existing Chevron USA personnel will only intermittently be present at the sites for routine maintenance and emergency repair, the Project will not impair or physically interfere with the implementation of adopted emergency response and evacuation plans. The Project will not demolish any existing public roadways and would not interfere with existing emergency response or evacuation plans. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would interfere with emergency response.

Mitigation: None required.

Fire Protection (h)

Conclusion: The Project would not expose people or structures to significant risk of loss due to a potential wildlife fire.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

According to the California Department of Forestry, fire hazards within the Kern River Oilfield are primarily designated as a State Responsibility Area. A portion of the oil field is designated as a Local Responsibility and Federal Responsibility Area. However throughout the Project sites, fire hazard severity is primarily "moderate." Potential fire risks associated with the proposed Project for construction will be very low because the Project sites will be slightly graded, and concrete poured as a foundation for each steam generator unit. All gas, water, steam, electrical compressed air and drain lines will be installed above grade. A fire hazard may be associated with operations if vegetation or other obstructions come into contact with energized electrical equipment. The proposed Project would be maintained in accordance with State Public Resource Code Part 2, Chapter 1, Article 3, Section 4291, which requires establishment of a defensible space of 100 feet from each side and from the front and rear structures.

Chevron USA currently uses a contractor to provide weed abatement services to maintain buffers in excess of 100 feet. Chevron USA will expand these services to include components of the proposed Project. Also, Chevron USA has standard protocols that are implemented due to the climate and desert topography of the proposed Project sites. Chevron USA coordinates with relevant emergency response and provides planning information to appropriate regulatory agencies and public emergency responders. The Kern County Fire Department is the primary provider of fire suppression and prevention services within Kern County. Standard fire prevention protocols include measures to address smoking and fire rules, storage and parking areas, use of gasoline powered tools, use of spark arresters on construction equipment, use of fire guard, fire suppression tools and equipment, and Chevron personnel and contractor training requirements. Trained fire suppression personnel and fire suppression equipment will be present at key locations, and personnel and equipment will be capable of responding to a fire within fifteen (15) minutes of notification. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would expose people or structures to significant risk of loss due to a potential wildlife fire.

Mitigation: None required.

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IX. Hydrology / Water Quality Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements?			✓	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	

IX. Hydrology / Water Quality (continued) Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?				✓
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			✓	
j) Inundation by seiche, tsunami, or mudflow				✓

IX. HYDROLOGY / WATER QUALITY

Water Quality, Waste Discharge, and Groundwater Supplies (a, b, e, f)

Conclusion: The Project will not violate any water quality standards or waste discharge requirements. The Project will not substantially deplete or degrade groundwater supplies or interfere substantially with groundwater recharge. The Project will not create or contribute runoff water in excess of existing storm water drainage capacity; therefore impacts are less than significant.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. Construction activities will include: simple grading of the area, concrete foundation for each steam generator unit, worker commutes, and installation of five 85.0 MMBtu/hr steam generators. The majority of new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal amount will be installed underground to support operational activities. The additional 62.5 MMbtu/hr steam generator will simply be relocated to one of the locations identified within Table 1. These construction activities could potentially result in erosion-included sedimentation in adjacent drainage paths and waterways if appropriate measures are not implemented during construction to minimize non-point source pollution. Potential construction related contaminants associated with the Project include solid wastes, sanitary wastes, fuel, oil, grease, construction material and debris. Any of these contaminants can potentially impair surface water runoff.

As part of standard construction practices implemented by Chevron USA, best management practices (BMP) have been established to minimize the potential for contaminated stormwater to run off-site. Construction-specific BMPs that will be implemented by Chevron USA will include, but not limited to the following:

- **Preservation of Existing Vegetation:** Carefully planned preservation of existing vegetation minimizes the potential of removing or injuring existing trees, vines, shrubs, and grasses to protect soil from erosion. This BMP is also used in conjunction with minimizing the total disturbed area, which reduces the potential for soil erosion by wind or stormwater.

- **Erosion Control:** Areas where surface soil is contaminated or susceptible to erosion will employ erosion control construction BMPs to prevent excessive erosion or contaminated soil migration. Erosion controls that may be implemented during construction include soil binders, geotextiles and mats, earth dikes and drainage swales, silt fence, fiber rolls, gravel bag berms, sandbag barriers, placement of gravel on exposed soil areas, such as access roads and laydown areas.

- **Wind Erosion Control:** Wind erosion control measures, such as covering soil stockpiles or application of water will be used in areas subject to soil erosion caused by wind.

- **Housekeeping Practices:** General good housekeeping practices, such as trash and debris removal, and drainage systems maintenance will be conducted during construction activities.

- **Vehicle and Equipment Cleaning, Fueling, and Maintenance:** Vehicle and equipment cleaning, fueling and maintenance will be conducted off-site when possible and will be restricted to designated areas onsite.

- **Material Delivery and Storage:** Outdoor material delivery activities will be performed properly, and only in designated areas to reduce the potential for contaminating stormwater. Any materials stored outdoors will be stored properly in designated areas. Liquids stored outdoors will be stored in proper containers and only in designated areas to reduce the potential for contaminating stormwater.

- **Spill Prevention, Control, and Cleanup:** Spill prevention and control measures will be implemented during construction to minimize the potential for spills to occur. Spills that may occur will be contained and cleaned up properly. These procedures are documented in the existing facility Spill Prevention, Control, and Countermeasures (SPCC) Plan. The SPCC Plan is reviewed and approved by the Department of Oil, Gas and Geothermal Resources (DOGGR). The same BMPs that are currently in use at the Kern River Oilfield are incorporated into the Project and used during construction activities.

- **Solid Waste Management:** Solid waste generated during construction activities will be handled, containerized, covered, and disposed of per applicable regulatory guidelines.

- **Hazardous Waste Management:** Hazardous waste generated during construction activities will be handled, containerized, covered, and disposed of in accordance with applicable regulatory guidelines.

- **Contaminated Soil Management:** Contaminated soils will be handled, stored, covered, and disposed of in accordance with applicable regulatory guidelines.

- **Sanitary/Septic Waste Management:** Proper sanitary and septic waste management prevent the discharge of pollutants to stormwater from sanitary and septic waste by providing convenient, well-maintained facilities, and arranging for regular service and disposal. Temporary sanitary facilities should be located away from drainage facilities, watercourse, and from traffic circulation. If site conditions allow, portable facilities should be placed at minimum of fifty (50) feet from drainage conveyance and traffic areas.

- **Liquid Waste Management:** Liquid waste generated during construction activities will be handled, stored, and disposed of in accordance with regulatory guidelines. This includes minimization of non-stormwater discharges, such as water produced during drilling activities and hydrostatic test water.

- **Clear Water Diversion:** Clear water diversions such as berms and other systems of structures and measures will be used to divert clean runoff from entering contaminated or storage areas.

The above BMPs will be implemented for construction activities to stabilize any potential slopes, reduce any potential contaminants, reduce any potential hazardous material spills, reduce fugitive dust, and prevent runoff and sediment from leaving the Project sites.

Operation of the Project will require the use of water to generate steam that will then be injected into the ground to enhance oil recovery. The water is originally stored in on-site storage tanks before distribution to the steam generators. Thereafter, it is then injected as steam during the thermally enhanced oil recovery (TEOR) process. The oil is then recovered at a 9:1 water to oil ratio at the well head and then separated at a dehydration facility. Upon concluding the separation process, the water is then filtered, cleaned up, softened, and recycled to steam generators located on-site for additional use. The remainder of the water that is not recyclable is disposed of via water injection wells or a pipeline sent to the Cawelo Water District.

Operational activities associated with the Project potentially affecting water quality include: extracting and transporting oil, gas and produced water from the wellheads to the separation tanks, storage tanks, water treatment facilities, steam generation plants, movement via pipeline, and injection of steam for enhanced recovery of oil and gas. These activities have the potential for a spill or leak to affect surface water, groundwater, or soils. As part of standard post-construction practices implemented by Chevron USA, best management practices (BMP) have been established to minimize any potential soil or water contaminants, hazardous materials spills, fugitive dust impacts, and prevent runoff and contaminants from leaving the Project site. Post-construction BMPs that will be implemented by Chevron will include, but not limited to the following:

- **Non-Stormwater Discharges:** Non-stormwater discharges, such as hydrostatic test water, well produced water, and process water will be minimized and retained on-site.

- **Building & Grounds Maintenance:** Building and grounds maintenance will be performed using procedures that minimize stormwater contamination.

- **Parking/Storage Area** Maintenance: Parking and storage areas shall be kept clean through good housekeeping and training to prevent stormwater contamination.

- **Drainage System Maintenance:** Drainage systems should be maintained on a regular basis to minimize stormwater contamination.

- **Water Quality Treatment:** Water quality treatment systems, such as oil water separators, and sedimentation/infiltration basins, will be used as needed in areas to prevent contaminated runoff.

- **Earth Dikes and Drainage Swales:** Earth dikes and drainage swales will be used to control runoff and divert it to a desired location.

Based on the above, the District concludes that the Project would have a less than significant impact on water quality, water discharge and groundwater supplies.

Mitigation: None required.

Drainage Systems (c, d)

Conclusion: The Project will not substantially alter Chevron USA's existing drainage pattern.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oil Field which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses.

The Project sites are within the Kern River Oilfield which consists of localized drainage swales, dry washes, ephemeral streams, and depressions that are physically and hydrologically isolated from larger, off-site water bodies (i.e – defined "waters of the United States"). As such, the Project is not located near nor will it alter any streams, rivers, or any other waterways. The Project requires minimal construction activities consisting of: simple grading of the area, concrete foundation for each steam generator unit, worker commutes, and installation of five 85.0 MMBtu/hr steam generators. The majority of new pipelines (water, gas, steam, etc.) will be installed above ground, although a minimal will be installed underground to support operational activities. The additional 62.5 MMbtu/hr steam generator will simply be relocated to one of the locations identified in Table 1. Therefore, the Project is expected to not have an impact on existing drainage patterns nor contribute to excessive runoff water.

Furthermore, the existing Project sites will not be altered enough to have a negative effect on surface runoff or increase flooding potential. Water activities occurring during construction activities or precipitation at the Project sites is rarely sufficient to cause runoff. Any runoff from the steam generator sites would either percolate near sites or runs to natural drainage channels. The Project would not introduce a new flood hazard and would not necessitate any new flood control projects. Therefore, there will be no impacts on any public drainage systems.

Mitigation: None required.

Flood Hazard Area, Flood Hazard Structures, Expose People or Structures (g, h, i, j)

Conclusion: The Project will not expose people or structures to flood hazards, seiche, tsunamis, or mudflows.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project does not include the construction of any housing units and is not located within the 100-year flood zone as mapped on the Flood Insurance Rate Maps (FIRMs); nor is the Project located in a Flood Hazard Safety Zone (FHSZ) as designated by Kern County.

The Project sites are not within a county that is identified in the Tsunami Inundation Maps prepared by the California Geological Survey and is therefore not at risk of inundation. Also, the Project does not propose to place people or structures within any area that is subject to flooding through any cause, including as a result of failure of a levee or dam nor will there be habitable structures proposed for construction of the Project. Therefore, there is no substantial evidence of record to support a conclusion that the Project would expose people or structures to flood hazards, seiche, tsunamis, or mudflows.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic, and Telephone Communication.

California Department of Conservation, California Geological Survey. *Tsunami Information.* Website: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Pages/Index.aspx

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

X. Land Use / Planning Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

X. LAND USE/PLANNING

Land Use and Planning (a, b)

Conclusion: The Project will not physically divide an established community, nor conflict with any established land use planning or zoning requirements.

Discussion: The Project consists of installing five new 85.0 MMBtu/hr natural gas-fired steam generators, and to relocate an existing 62.5 MMBtu/hr steam generator within the existing boundaries of the Kern River Oilfield. The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. There is no established community that may be physically divided.

Pursuant to Section 19.20.020 and Section 19.14.020, Part E (Resource Extraction and Energy Developments Uses) of the Kern County Zoning Ordinance, "*Cogeneration facility or steam generators, primarily intended for steam production used for production of oil or gas, excluding coal fired*" may be permitted in areas designed as "Exclusive Agriculture District (A)" and "Limited Agriculture (A-1)." As such, the surrounding land uses are designated either general agriculture or oil production zoned as "Exclusive Agriculture (A)" and "Limited Agriculture (A-1)." Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would conflict with applicable land-use plans, policies, or regulations.

Mitigation: None required.

Habitat and Natural Community Conservation Plans (c)

Conclusion: The Project will not conflict with any applicable Habitat Conservation Plans or Natural Community Conservation Plan.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. In April of 2009, the County of Kern and City of Bakersfield issued a Metropolitan Bakersfield Habitat Conservation Plan (MBHCP). The MBHCP's goal is to acquire, preserve and enhance native habitats which support the protection of endangered and sensitive species, while allowing urban development to proceed as set forth in the 2010 Bakersfield Metropolitan General Plan. The MBHCP study area covers the oilfield and overall covers the geographical boundaries of the County of Kern and City of Bakersfield. As such, the Project will have no impact on the habitat quality, as it will be consistent with the MBHCP.

In December of 2006, the County of Kern Planning Department issued a Draft County Valley Floor Habitat Conservation Plan (DVFHCP). The DVFHCP divides Kern County (program area) into three (3) separate habitat zone categories based on the habitat value as follows: Red Zone (the highest valued conservation habitat), Green Zone (area with some disturbance but important for movement of covered habitat species), and White Zone (limited importance due to intensive land uses). In addition to the three (3) habitat quality zone areas, the DVFHCP identifies an Oil Zone as part of the Oil strategy. According to Figure 3-1 (Habitat Zones) and Figure 5-1 (Existing Land Uses) of the DVFHCP, the Project is located within the "White and Green Zone" and an "Oil Field- High Intensity Zone." As such, the Project is consistent with the DVFHCP and therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would conflict with an applicable and existing habitat conservation plan.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

California Department of Fish and Wildlife. *Natural Community Conservation Planning.* Website: http://www.dfg.ca.gov/habcon/nccp/.

City of Bakersfield. *Metropolitan Bakersfield Habitat Conservation Plan (MBHCP).* Website: http://www.bakersfieldcity.us/weblink7/ElectronicFile.aspx?docid=625001&dbid=0.

County of Kern. *2009 General Plan*. Website: http://pcd.kerndsa.com/planning/planning-documents/general-plans.

County of Kern. Planning and Community Development. *First Draft Valley Floor Habitat Conservation Plan. Website:* http://pcd.kerndsa.com/planning/planning-programs.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Kern County Planning Department. Kern County Zoning Ordinance. Official Zoning Maps. Zoning Map 81 and Zoning Map 82.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

United States Fish and Wildlife Service. *Conservation Plans and Agreements Database.* Website: http://ecos.fws.gov/conserv_plans/public.jsp.

United States Fish and Wildlife Service. *Habitat Conservation Plans.* Website: http://www.fws.gov/endangered/what-we-do/hcp-overview.html.

XI. Mineral Resources Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
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?				✓

XI. MINERAL RESOURCES

Mineral Resources (a, b)

Conclusion: The Project will have no impact on loss of availability of a regional, state, or locally important mineral resource.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield, which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project sites are zoned as Exclusive Agriculture (Zone A) and Limited Agriculture (Zone A-1). Per the 2009 Kern County

General Plan, the Project sites are designated as Mineral Petroleum (8.4) and State and Federal Plan (Code 1.1). The Project sites are not located in areas known to contain a mineral resource that is of value to the region or state. Therefore, the District concludes that there is no substantial evidence of record to support a conclusion that the Project would result in the loss of a known mineral resource or the availability of a locally important mineral resource recovery site.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

California Department of Conservation, California Geological Survey. *Mineral Resources*. Website: http://www.conservation.ca.gov/cgs/geologic_resources/mineral_resource_mapping/Pages/Index.aspx.

County of Kern. *2009 General Plan*. Website: http://pcd.kerndsa.com/planning/planning-documents/general-plans.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping*. Website: http://esps.kerndsa.com/gis.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XII. Noise Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✓	
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✓	

XII. Noise (continued) Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				✓
f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?				✓

XII. NOISE

Exposure of Persons to Noise and Vibration and Ambient Noise Levels (a-d)

Conclusion: The Project may result in the exposure of persons to increased noise or vibrations and may increase ambient noise levels in the Project vicinity; however, the potential impacts are less than significant.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield, which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Kern County General Plan Noise Element identifies the following land uses as noise sensitive:

- Residential areas
- Schools
- Convalescent and acute care hospitals
- Parks and recreational areas
- Churches

The area surrounding the Project sites are zoned agricultural and is either vacant agricultural land or contains existing oil production operations. During construction activities, noise levels are expected to be elevated. However, the increase in noise is temporary and will subside once construction of the Project is complete. State and federal standards set by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulate the amount of time workers may be exposed to sound levels above 90 dB. The Project may result in noise exceeding 90 dB and a slight increase in ground vibration within 50 feet of the proposed steam generators site.

If the Project results in noise levels exceeding 85 dB, Chevron USA will comply with all OSHA regulations for the protection against the effects of noise exposure (CCR §5095-5100).

The proposed Project will result in a permanent increase in ambient noise levels. During construction activities, noise levels will be elevated. However, the increase in noise is temporary and will subside once construction of the Project is complete. As such, ambient noise levels are not expected to increase to above 90 dB except in areas immediately near the discharge headers. Future noise types and volumes will be consistent with current land use and existing oil production operations. The nearest sensitive receptor to the Project is located approximately 3,300 feet from the Project site. As such, the Project would not cause a distinguishable change in noise levels to the general public. Therefore, the District concludes that there is no substantial evidence of record that the Project would expose the public or Chevron USA to significant increase in noise or vibrations.

Mitigation: None required.

Increased Noise Exposure Near Airfields (e, f)

Conclusion: The Project will not expose people residing or working in the Project area to excessive noise levels.

Discussion: The Project will be located within the Chevron USA existing surface boundaries in the Kern River Oilfield which historically has been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently disturbed and occupied by Chevron US for oil production activities consistent with current and surrounding land uses. The Kern County Meadows Field (public airport), Bakersfield Memorial Hospital (private heliport), and Kern Medical Center (public heliport) are all located within two (miles) of the Kern County Oilfield. The closest airport/heliport is located approximately 1.5 miles from the oilfield boundary. Chevron USA has disturbed and occupied the Kern River Oilfield for the exploration and production of oil and gas activities for many years. The Project is consistent with applicable rules and land use requirements. As such, the Project will not expose people residing or working the Project area to excessive noise levels.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

County of Kern. *2009 General Plan.* Website: http://pcd.kerndsa.com/planning/planning-documents/general-plans.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XIII. Population / Housing Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

XIII. POPULATION AND HOUSING

Population (a)

Conclusion: The Project will not result in a substantial growth in population.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield, which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project will be maintained and manned by existing Chevron USA personnel and contractors. The Project involves the installation of five 85.0 MMBtu/hr steam generators and to relocate an existing 62.5 MMBtu/hr steam generator within current Kern River Oilfield operations which does not include on-site housing. As such, the Project will not induce substantial population growth or result in a significant increase in employment. Therefore, impacts are less than significant.

Mitigation: None needed.

Housing (b, c)

Conclusion: The Project will not result in the displacement of housing units or people.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield, which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project involves the installation of five 85.0 MMBtu/hr steam generators, and to relocate an existing 62.5 MMbtu/hr steam generator on sites that currently consist of parcels designated for oil production activities. There are no residential buildings within the Kern River Oilfield or Project sites. Therefore, the proposed Project will have no impact in this regard.

Mitigation: None needed.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

County of Kern. *2009 General Plan*. Website: http://pcd.kerndsa.com/planning/planning-documents/general-plans.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XIV. Public Services Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
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?				✓

XIV. PUBLIC SERVICES

Fire Protection (a,i)

Conclusion: The Project will not result in an increased demand for fire protection services.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project is located in a Local Responsibility Area (LRA) and State Responsibility Area (SRA) for fire protection. As such, CAL Fire has determined that these areas are only designated as Moderate Fire Hazard Severity Zones and not designated as "Very High" Fire Hazard Severity Zones. The Project will be designed to conform to current California Fire Code and Federal safety standards. Therefore, installation and operation of Project in accordance with these standards will minimize the potential for a fire. Fire protection for this property is currently under the jurisdiction of the Kern County Fire Department. The nearest fire station to the Project is Station 63 – Highland Fire Station located approximately four (4) miles west of the Project sites. This fire station covers approximately 149 square miles and would be adequate to cover the Project. No new or altered police protection facility would be necessary. No additional increase in fire protection demand is anticipated. Therefore, there is no substantial evidence of record to support a conclusion that the Project would have a negative impact on existing fire protection services.

Mitigation: None required.

Police Protection and Other Public Facilities (a.ii – a.v)

Conclusion: The Project will not result in an increased demand for police protection or other public facilities, nor will the Project result in a decrease in response times.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for exploration and production of oil (see Figures 2 and 3). The Project is located property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The nearest police station to the Project is the Kern County Sherriff's Office police substation located at Rosedale Highway, California. The Project is expected to be maintained and manned by existing Chevron USA personnel and contractors. It will not increase the population in the surrounding area nor require additional schools, parks, or other public facilities. As such, a lack of substantial increase in population precludes the possibility of the Project having a negative impact on police services, local schools and parks, or any other public facility.

Therefore, there is no substantial evidence of record to support a conclusion that the Project would have a significant impact on public facilities and services.

Mitigation: No mitigation is required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

CAL FIRE Hazard Severity Zone Map. Website: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping*. Website: http://esps.kerndsa.com/gis.

Kern County Fire Department. *Stations*. Website: http://www.kerncountyfire.org/

Kern County Sheriff's Office. Website: http://www.kernsheriff.com/FieldOps/Substations/Pages/default.aspx

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XV. Recreation Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

XV. RECREATION

Recreational Facilities (a, b)

Conclusion: The Project will not have an impact on neighborhood or regional parks, or any other local recreational facilities.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project area currently does not contain a recreational facility nor will the proposed Project require the construction or expansion of recreational facilities. Construction and operation of the Project will not increase population of the surrounding area and therefore, will not increase demand for recreation.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

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

XVI. TRANSPORTATION / TRAFFIC

Conflict with Transportation, Transit Plans and Facilities (a, b, f)

Conclusion: The Project will not conflict with any circulation plans, congestion management programs, or alternative transportation facilities.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The proposed Project is expected to be maintained and manned by existing Chevron USA personnel and contractors. Project construction related traffic is short-term in nature, and will not be sufficient to impede the flow of traffic or decrease the level of service (LOS) on existing roads. Therefore, the District concludes that there is no substantial evidence of record that the Project will conflict with any circulation plans, congestion management programs, or alternative transportation facilities.

Mitigation: None required.

Potential Safety Risks (c, d, e)

Conclusion: The Project related traffic will not change air traffic patterns or include hazardous design features and, therefore, will not pose a safety risk.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries in the Kern River Oilfield which historically have been allowed for the exploration and production of oil (see Figures 2 and 3). The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The proposed Project is expected to be maintained and manned by existing Chevron USA personnel. The Project sites is located approximately 1.5 to the Kern County Meadows Field (public airport), 1.5 miles to the Bakersfield Memorial Hospital (private heliport) and 1.9 miles to the Kern Medical Center (public heliport). Project construction and operations will not present a safety risk resulting from a change in traffic patterns, as oil and gas production activities within the Kern River Oil Field have been occurring for many years.

The Project sites will not include the construction of new public roads or alterations to existing public roads or intersections. However, temporary equipment staging areas may become part of the Project sites and may be set aside for employee and visitor vehicle parking. Therefore, the District concludes that the Project will not present any safety risks resulting from a change in air traffic patterns, nor result in increased road hazards, nor impact emergency access.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

Google Maps. September 2014.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XVII. Utilities / Service Systems Would the Project:	**Potentially Significant Impact**	**Potentially Significant Impact Unless Mitigated**	**Less Than Significant Impact**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e) Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?				✓
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?				✓
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓

XVII. UTILITIES / SERVICE SYSTEMS

Wastewater Treatment and Facilities (a, b, e)

Conclusion: The Project will not require additional wastewater or storm water facilities.

Discussion: The Project will be located within the Chevron USA's existing surface boundaries of the Kern River Oilfield and on property currently occupied by Chevron USA for oil production activities, consistent with current and surrounding land uses. The Project will require the use of water to generate steam that will then be injected into the ground to enhance oil recovery. The water is originally stored in on-site storage tanks before distribution to the steam generators. Thereafter, it is then injected as steam during the thermally enhanced oil recovery (TEOR) process. The oil is then recovered at a 9:1 water to oil ratio at the well head and then separated at a dehydration facility. Upon concluding the separation process, the water is then filtered, cleaned up, softened and recycled to steam generators located on-site for additional use. The remainder of the water that is not recyclable is disposed of via water injection wells or a pipeline sent to the Cawelo Water District. As such, the Project will not require construction or modification to wastewater facilities. Therefore, the District concludes there is no substantial evidence of record to support a conclusion that the Project would have a significant impact on any wastewater treatment providers.

Mitigation: None required.

Storm Water Drainage Facilities (c)

Conclusion: The Project would not require the construction of new stormwater drainage facilities, therefore impacts are determined to be less than significant.

Discussion: The Project is located on property currently occupied by Chevron USA for oil production activities consistent with current and surrounding land uses. The Project will be sited in areas where there will be minimal "new" disturbance of soil. All of the surface area disturbed by construction is to remain as part of the existing Kern River Oilfield after construction is complete. Precipitation at the Project sites is rarely sufficient to cause runoff. Any runoff from the steam generator sites would either percolate near the Project sites or would runoff to natural drainage channels. As such, the existing Project sites will not require the construction of new storm water drainage facilities.

Mitigation: None required.

Water Supply (d)

Conclusion: The Project will have sufficient water supplies, as such, no new or expanded entitlements are not required.

Discussion: The Project is located on property current occupied by Chevron USA which historically has allowed for the exploration and production of oil. The Project is located within the existing boundaries of the Kern River Oil Field as designated by the Department of Oil, Gas and Geothermal Resources (DOGGR), and is consistent with

current operations. The Project will use water to generate steam that will then be injected into the ground to enhance oil recovery. The water is originally stored in on-site storage tanks before distribution to the steam generators. Thereafter, it is then injected as steam during the thermally enhanced oil recovery (TEOR) process. The oil is then recovered at a 9:1 water to oil ratio at the well head and then separated at a dehydration facility. Upon concluding the separation process, the water is then filtered, cleaned up, softened and recycled to steam generators located on-site for additional use. The remainder of the water that is not recyclable is disposed of via water injection wells or a pipeline sent to the Cawelo Water District. As such, existing water supplies are sufficient to operate the Project. No new water supplies and no new or expanded entitlements are required. The District concludes that the Project will have sufficient water supplies available and will not result in any new or expanded entitlements. Therefore, impacts are less than significant.

Mitigation: None required.

References

Beck, Daniel L, Health, Environment & Safety Specialist. Chevron North America. Electronic and Telephone Communication.

County of Kern. Engineering, Surveying and Permit Services. *Kern County Online GIS Mapping.* Website: http://esps.kerndsa.com/gis.

Google Maps. September 2014.

Rickards, Kristopher, HES Specialist/Engineer-Air. Chevron North America Exploration & Production. Electronic and Telephone Communication.

XVIII. Mandatory Findings of Significance Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
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?		✓		

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Impacts on the Environment and Special Status Species (a)

Conclusion: The Project with the incorporation of mitigation measures will not result in significant impacts on the environment or special status plant and animal species.

Discussion: With the incorporation of required permit conditions, the surrendering of Emission Reduction Credits (ERCs), and the incorporation of mitigation measures as outlined in the Initial Study, the Project will have a less than significant impact on the environment and special status species.

Mitigation: See Mitigation Measures AIR-1, BIO-1 through BIO-26, CUL-1 and CUL-2.

Cumulative Impacts (b)

Conclusion: The Project with the incorporation of mitigation measures will not have a cumulatively significant impact on the environment.

Discussion: CEQA Guidelines state that a Lead Agency shall consider whether the cumulative impact of a Project is significant and whether the effects of the project are cumulatively considerable (CCR §15065). The assessment of the significance of the cumulative effects of the Project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature and location of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The Project is not a part of any larger planned developments. Therefore, the Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., an increase in population that could lead to an increase need to housing, increase in traffic, air pollutants, etc.).

Mitigation: See Mitigation Measures AIR-1, BIO-1 through BIO-26, CUL-1 and CUL-2.

Impacts on Humans (c)

Conclusion: The Project with the incorporation of mitigation measures will not result in significant environmental impacts that would cause substantial adverse effects on human beings.

Discussion: The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have a substantial impact on human beings, either directly or indirectly. Project design elements and mitigation measures have been incorporated into the Project to reduce all potentially significant impacts to less than significant.

Mitigation: See Mitigation Measures AIR-1, BIO-1 through BIO-26, CUL-1 and CUL-2.

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H. APPENDICES

Appendix A. Acronyms and Abbreviations
Appendix B. Mitigation Monitoring and Reporting Program
Appendix C. Construction Emissions
Appendix D. Engineering Evaluation
Appendix E. Risk Management Review

Appendix A. Acronyms and Abbreviations

AAQA	Ambient Air Quality Analysis
AAQS	Ambient Air Quality Standards
AB 2588	Assembly Bill 2588 – Air Toxics "Hot Spots" Information and Assessment Act
AB 32	Assembly Bill 32 – California Global Warming Solutions Act of 2006
ATC	Authority to Construct
BACT	Best Available Control Technology
dB	Decibel
BAU	Business as Usual
BMP	Best Management Practice
BPS	Best Performance Standards
Cal/OSHA	California Department of Industrial Relations - Division of Occupational Safety and Health Administration
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CH4	Methane
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COC	Certificate of Conformity
dB	Decibel
District	San Joaquin Valley Unified Air Pollution Control District
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DTSC	California Department of Toxic Substances Control
DVFHCP	Draft County Valley Floor Habitat Conservation Plan
ERC	Emission Reduction Credit
ERG	Environmental Review Guidelines
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map
FHSZ	Flood Hazard Safety Zone
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HCP	Habitat Conservation Plan
HRA	Health Risk Assessment
LOS	Level of Service
LRA	Local Responsible Agency

MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
MEI	Maximally Exposed Individual
MMBtu/hr	Million British Thermal Units Per Hour
N2O	Nitrous Oxide
NOx	Oxides of Nitrogen
NRA	California Natural Resources Agency
NSR	New Source Review
PM_{10}	Particulate Matter 10 microns in diameter
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter
RMR	Risk Management Review
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SIP	State Implementation Plan
SPCC	Spill Prevention, Control, and Countermeasures
SOx	Sulfur Oxides
SRA	State Responsibility Area
TAC	Toxic Air Contaminant
TEOR	Thermally Enhanced Oil Recovery
TPY	Tons Per Year
US EPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VOC	Volatile Organic Compound

Appendix B. Mitigation Monitoring and Reporting Program

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
Project operational emissions may exceed the District's thresholds of significance.	Potentially Significant	AIR-1	For ATC Project S-1140568: • Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter – 2,234 lb., 2nd quarter - 2,234 lb., 3rd quarter - 2,234 lb., and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,536 lb., 2nd quarter - 1,536 lb., 3rd quarter - 1,536 lb., and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of SOx emissions: 1st quarter – 531 lb., 2nd quarter - 531 lb., 3rd quarter - 531 lb., and fourth quarter – 531 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]	San Joaquin Valley Air Pollution Control District	Less than Significant

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			• Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions to offset PM10 requirements: 1st quarter – 559 lb., 2nd quarter - 559 lb., 3rd quarter - 559 lb., and fourth quarter – 559 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 and 4.13.3 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • ERC Certificate Numbers S-3208-2(NOX), S-3737-1 (VOC), and S-3154-5(SOX) (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] • Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter – 1,643 lb., 2nd quarter – 1,643 lb., 3rd quarter – 1,643 lb., and fourth quarter – 1,643 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			• Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of SOx emissions: 1st quarter – 390 lb., 2nd quarter - 390 lb., 3rd quarter - 390 lb., and fourth quarter – 390 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions to offset PM10 requirements: 1st quarter – 411 lb., 2nd quarter - 411 lb., 3rd quarter - 411 lb., and fourth quarter – 411 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 and 4.13.3 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] • ERC Certificate Numbers S-3208-2(NOX), S-3737-1 (VOC), and S-3154-5(SOX) (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]		
The project could result in take of a candidate, sensitive, or special status species.	Potentially Significant	BIO-1	A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard	San Joaquin Valley Air Pollution Control District	Less than Significant

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-2	During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-3	A biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-4	Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all Project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
		BIO-5	During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-6	All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-7	All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-8	No firearms shall be allowed on the Project sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
		BIO-9	No pets, such as dogs or cats, shall be permitted on the Project sites. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-10	Use of rodenticides and herbicides in the Project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [*Public Resources Code 21000-21177: California Environmental Quality Act*] Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-11	An employee education program shall be conducted for any Project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			the previously referenced people and anyone else who may enter the project site. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-12	Upon completion of the Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-13	In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-14	Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden. Contact information for CDFW and USFWS is provided below in Measure BIO-17: [*Public Resources Code 21000-21177: California Environmental Quality Act*]		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
		BIO-15	The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. 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. Contact information is provided below. [*Public Resources Code 21000-21177: California Environmental Quality Act*] CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014		
		BIO-16	CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600.		
		BIO-17	New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-18	If habitat for, and/or the presence of sensitive species are documented in the pre-construction surveys, additional focused		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			biological surveys will be conducted by a Qualified Wildlife Biologist for the appropriate survey periods as identified in the CDFW and USFWS protocols identified below. [*Public Resources Code 21000-21177: California Environmental Quality Act*] ○ Blunt-nosed leopard lizard – Approved Survey Methodology for the Blunt-nosed Leopard Lizard (CDFG, 2004) ○ San Joaquin kit fox – Standardized Recommendation for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance (USFWS, 2011) ○ Burrowing owl – Staff Report on Burrowing Owl Mitigation dated March 7, 2012 (CDFG, 2012)		
		BIO-19	Permittee shall retain at least one staff or contractor representative that has successfully completed the applicant's Biological Awareness training program on-site during all ground disturbing activities and Project construction. In the event that special status species are discovered on or near the Project site, said staff/contractor shall immediately contact the Company's biological representative identified in the biological training. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-20	Blunt-nosed leopard lizard surveys following current CDFG guidelines shall be completed no more than one year prior to initiation of Project if construction activities will impact potential habitat for the species. Potential habitat includes areas that have not been previously disturbed or that have recovered to support vegetation and small mammal burrows that represent potential shelter for blunt-nosed leopard lizard. If at any time blunt-nosed leopard lizards are observed during these surveys, no disturbance of areas that could be occupied by this species		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			should occur within 500 feet of the observation without prior approval from CDFG and USFWS. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-21	The limits of Project site grading shall be clearly delineated prior to construction activities by posting stakes, flags and/or rope or cord, as necessary. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-22	Traffic restraints and signs shall be established and issued to minimize temporary disturbances. All Project-related vehicle traffic shall be restricted to established roads, designated access roads and routes, Project site, storage areas, and staging and parking areas. Off-road traffic outside designated Project boundaries shall be prohibited. All equipment storage and parking during Project activities shall be confined to the designated construction area or to previously disturbed offsite areas that are not habitat for listed species. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		
		BIO-23	Traffic restraints and signs shall be established and issued to minimize temporary disturbances. All Project-related vehicle traffic shall be restricted to established roads, designated access roads and routes, Project site, storage areas, and staging and parking areas. Off-road traffic outside designated Project boundaries shall be prohibited. All equipment storage and parking during Project activities shall be confined to the designated construction area or to previously disturbed offsite areas that are not habitat for listed species. If vegetation clearing is conducted between February and mid-September, a survey targeting identification of nesting birds shall be conducted. This survey may be conducted in conjunction with the pre-activity survey. If any nesting birds covered by the Migratory Bird Treaty Act are identified, nests shall be avoided by an appropriate distance such that nesting activities are not interrupted until the young have fledged.		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			Determination of when young have fledged from active nests will be determined by a qualified biologist. If any nesting birds are found during vegetation clearing activities, a qualified biologist shall be contacted to determine appropriate avoidance measures. If any burrowing owl burrows are observed, avoidance measures should be consistent with those included in "Staff Report on Burrowing Owl Mitigation," CDFG (2012) taking into account existing disturbances such as roads and structures. Absolutely no disturbance to active nests shall occur without a permit pursuant to the Migratory Bird Treaty Act. For nesting sites, based on the level of disturbance, the following buffer distances shall apply and be adequately delineated around active nests. o April 1 – Aug 15: low disturbance, 200 meters; medium disturbance, 500 m; and high disturbance, 500 m. o Aug 16 – Oct 15: low disturbance, 200 meters; medium disturbance, 200 m; and high disturbance, 500 m. o Oct 16 – Mar 31: low disturbance, 50 meters; medium disturbance, 100 m; and high disturbance, 500 m. o All power poles and electrical facilities should be designed to minimize the potential for electrocution of migratory and resident birds, including consideration of birds with a wingspan of up to 9 feet.		
		BIO-24	To reduce potential impacts to the San Joaquin kit fox, Permittee shall implement the following avoidance measures: o For San Joaquin kit fox dens within 200 feet of the construction area, avoidance zones shall be identified by wooden or metal stakes connected by flagging or by other similar fencing material. Each avoidance zone shall		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			have the following distance measured outward from the den or burrow entrances or the edge of the plant population. o Potential den:50 ft o Atypical den: 50 ft o Known den: 100 ft o Natal/pupping den (occupied and unoccupied): Contact CDFW o San Joaquin antelope squirrel: 50 ft o Potential kit fox dens shall be monitored until they can be shown to be unoccupied based on the procedures outlined in Standardized Recommendation for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance (USFWS, 2011), and then covered with plywood that is firmly secured to prevent access by kit foxes during Project activities. The covers shall not be installed more than 14 days prior to the start of construction. The covers shall remain in place for the duration of construction, after which time they shall be removed. o If avoidance of any potential kit fox den within the Project site is not practicable, and the den may be unavoidably damaged or destroyed by Project actions, the following procedure shall be implemented: Prior to surface-disturbing activities, any such potential kit fox den shall be completely excavated and then backfilled to preclude later use by kit foxes during the construction period. If, at any time during monitoring or excavation, any sign that the den may be or has been occupied is found, the den's status changes to "known".		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			○ Potential kit fox dens may be excavated provided that the following conditions are satisfied: (1) the den classification is determined by a qualified wildlife biologist; and (2) the excavation is conducted by or under the direct supervision of a qualified wildlife biologist.		
		BIO-25	To reduce potential impacts to the San Joaquin kit fox, antelope squirrel and giant kangaroo rat, Permittee shall implement the following avoidance measures: ○ If dens or nest burrows are located outside of the construction area but within the avoidance zone designated for the resource type (listed above), the boundary of the avoidance zone shall be drawn to include all areas within the radius stated above, except those falling within the construction area. If the construction area encroaches on an avoidance area, potential dens shall not be excavated unless a qualified biologist determines that excavation is absolutely necessary. ○ Avoidance zones shall be maintained until all construction activities have been completed, and then shall be removed by a qualified biologist. ○ Dens identified by a qualified biologist as either a "known" den or as a "suspected" pupping den shall not be excavated unless the appropriate California Endangered Species Act (CESA) and Federal Endangered Species Act permits authorized such excavations. In addition, any occupied natal or pupping dens cannot be		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			destroyed until the pups and adults have vacated.		
		BIO-26	To reduce potential impacts to Nelson's antelope squirrel and the giant kangaroo rat, Permittee shall implement the following avoidance measures: o For burrows within 200 feet of the construction area, avoidance zones shall be identified by wooden or metal stakes connected by flagging or by other similar fencing material. Each avoidance zone shall be a minimum of 50 ft outward from the den or burrow entrances or the edge of the plant population. o If burrows cannot be avoided, no Project activities shall occur until the appropriate CESA permit has been issued by CDFW. The following measures are required to minimize and mitigate for impacts to antelope squirrel and the giant kangaroo rat: o Burrows will be avoided to the maximum extent practicable. o If occupied burrows cannot be avoided, a trapping effort will be conducted by a properly permitted wildlife biologist for the purpose of either relocation or holding and releasing individuals back into temporarily disturbed portions of the Project site. o CDFW will be provided with a notification at least 30 days prior to trapping and relocation with a plan that includes at least the following information: 1) approximate number of San Joaquin antelope squirrels to be affected; 2)		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			previous experience of the wildlife biologist conducting the trapping and relocation; 3) description of trapping effort; 4) description of relocation plans; 5) whether individuals will be temporarily held for release; 6) off-site release locations; 7) artificial burrow placement; and 8) proposed results reporting schedule. If CDFG does not respond within 30 days of receiving the notification, trapping and relocation will proceed as stated in the notification. San Joaquin antelope squirrels should not be relocated greater than 500 feet from capture location without prior approval from CDFW.		
The project could have an impact on archaeological or paleontological resources.	Potentially Significant	CUL-1	In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]	San Joaquin Valley Air Pollution Control District	Less than Significant
		CUL-2	In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition,		

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
			should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [*Public Resources Code 21000-21177: California Environmental Quality Act*]		

Appendix C. Construction Emissions

Available Upon Request at District Office:

San Joaquin Valley Air Pollution Control District
Central Region
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-6000

Appendix D. Draft Engineering Evaluations

Available Upon Request at District Office:

San Joaquin Valley Air Pollution Control District
Southern Region
34946 Flyover Court
Bakersfield, CA 93308
(661) 392-5500

Appendix E. Risk Management Review

Available Upon Request at District Office:

San Joaquin Valley Air Pollution Control District
Central Region
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-6000