

Kern County

Oil and Gas Permitting Handbook



July 1, 2016

Prepared by:

County of Kern
Planning and Natural Resources Department
2700 'M' Street, Suite 100
Bakersfield, CA 93301

July 1, 2016

Should you have any questions regarding the Oil and Gas Conformity Review and the County Zoning Ordinance please contact the Kern County Planning and Natural Resources Department in person, by phone at 661-862-8614 or by email at OilandGas@co.kern.ca.us.

Guide Introduction

The Kern County Zoning Ordinance contains provisions for local permitting of oil and gas production. Specifically, Chapter 19.98 (Oil and Gas Production) provides development standards for all future oil and gas exploration, extraction, operations, and production activities in the unincorporated Kern County. The Amendment to the Kern County Zoning Ordinance related to Chapter 19.98 and other oil and gas provisions in the Zoning Ordinance was approved on November 9, 2015, and became effective on December 9, 2015.

The purpose of this document is to serve as a quick reference for project proponents as well as an education tool for individuals to navigate the County's oil and gas land use regulations, including Oil and Gas Conformity Review (OCGR) or Minor Activity Review (MAR). This document outlines the level of review required for different environmental situations. It is intended to serve only as a guide, the specific required regulations are contained within the Kern County Zoning Ordinance. An understanding of the ministerial permitting process will improve the efficiency of the process for both the private and public sector, in return creating a more successful project from the outset.

Quick Tips

- The complete Kern County Zoning Ordinance can be accessed through the Kern County Planning and Natural Resources Department website at: <http://pcd.kerndsa.com/planning/planning-documents/zoning-ordinance>.
- The Final Amendments to the Ordinance and Final EIR affecting Oil and Gas Permitting can be accessed through the Kern County Planning and Natural Resources Department at <http://pcd.kerndsa.com/planning/oil-gas-zoning-amendment>.
- The Kern County Online GIS Mapping Tool can be accessed through the Kern County Planning and Natural Resources Department website at: <http://esps.kerndsa.com/gis/gis-disclaimer/9-uncategorised/316-gis-mode-selection>. This tool will identify the Tier, Zone District, Map Code Designation, and other information about a parcel in Kern County. The County maintained Data Basin website can also be found here: <http://kcpcdd.databasin.org/>
- Applications for Oil and Gas Conformity Reviews or Minor Activity Reviews may be submitted in person at the Planning and Natural Resources Department, located at 2700 "M" Street, Suite 100, Bakersfield, CA 93301.
- If any information is unclear or there are any additional questions regarding the Kern County Oil and Gas Conformity Review, please contact the Energy Division of the Kern County Planning and Natural Resources Department.

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Where to start?

Tier System for Oil and Gas

In order to facilitate oil and gas permitting in Kern County, Chapter 19.98 divides the Oil and Gas Production Area into a Tier System relating to the type of land use activity. Oil and gas production in Kern County varies in intensity, depending on the historic uses, surrounding land uses and zoning classifications, and the type of agricultural land. The online Geographic Information System (GIS) mapping system offers a tool for applicants to determine the tier their site is located in. Please refer Appendix A for a general overview of the online GIS system manual).

Once you have determined the Tier your project is located in, you can review the requirements specific to your Tier classification. A description for general information of each Tier is provided. The Tier boundaries are adopted in the Zoning Ordinance and not subject to any interpretations of uses.

Oil and Gas production in Kern County occurs within the portion of Kern County depicted in Figure 19.98.015. This Oil and Gas Activities Boundary Area is divided into five (5) Tier Areas and depicted in Figure 19.98.015. Changes to the Oil and Gas Production Boundary Area and Tier boundaries of Figure 19.98.015 shall be through the procedures in Chapter 19.112.

The Tier Areas were designated based on the following land use planning considerations:

Tier 1 Area is defined as all areas in which oil and gas activity is the primary land use. The existing well and activity densities preclude almost all other uses except for passive uses such as grazing.

Tier 2 Area is defined as all areas that are classified Exclusive Agriculture (A) or Limited Agriculture (A-1) Districts, have agriculture as the primary surface land use, and are not included in Tier 1.

Tier 3 Area is defined as other areas not within a Tier 1 Area that are located in one of the following zone districts:

- Natural Resource (NR)
- Recreation Forestry (RF)
- Light Industrial (M-1)
- Medium Industrial (M-2)
- Heavy Industrial (M-3)
- Floodplain Primary (FPP)
- Drilling Island (DI)
- Zone Districts that have the Petroleum Extraction (PE) Combining District

Tier 4 Area is defined as areas not within Tier 1, 2, or 3, that include at least one of the following zone districts:

- Estate (E)
- Low-Density Residential (R-1)
- Medium-Density Residential (R-2)
- High-Density Residential (R-3)
- Commercial Office (CO)
- Neighborhood Commercial (C-1)
- General Commercial (C-2)
- Highway Commercial (CH)
- Open Space (OS)
- Platted Lands (PL)
- Mobilehome Park (MP)

Authorized oil and gas activities in Tier 4 are subject to approval of a conditional use permit in accordance
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with 19.104 of this Title.

Tier 5 are areas including all current and future Specific Plan boundaries either adopted with a Special Planning (SP) District or which include specific provisions for oil and gas operations. Oil or gas exploration and production activities would be allowed with a conditional use permit or as permitted by the regulations contained within the adopted Specific Plan in Tier 5 areas.

All other areas not defined as Tier 1-5 Areas within the Oil and Gas Production Area are considered Non-Jurisdictional because they are not within the jurisdiction of Kern County.-Including land owned by the United States, State of California or land within an incorporated city are exempt, unless under the authority of a written agreement with the Board of Supervisors. The regulations set forth in this chapter pertain only to accessory structures, facilities or uses that are physically connected to, provide access or services to, or otherwise support, oil and gas activities in these Non-Jurisdictional Areas.

Which Permit is Required?

This amendment established a ministerial review permit process for all new oil and gas activities within the Project Area located within a 3,700-square-mile portion of Kern County in the San Joaquin Valley bounded by King and Tulare Counties to the north, Santa Barbara and San Luis Obispo Counties to the west and; the Tehachapi Mountains and Sierra Nevadas to the east; and the northern boundary of the Los Padres National Forest to the south. New Oil and Gas activities are not permitted outside of this portion of Kern County.

The new County ministerial permit process does not change other agency permit requirements. For example, all Oil and Gas activities still require appropriate permits from the State Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). The new County ministerial permit process generally requires proponents to obtain a local County permit as well before any activities can commence.

It is critical to determine whether or not an activity will require an Oil and Gas Conformity Review, Minor Activity Review, No Permit Required or a Conditional Use Permit. The project applicant should determine whether or not the County will require a permit for the activity and what specific documentation or submittal items are required for each.

First, the operator needs to determine whether the proposed new Oil and Gas activity consists of maintenance, construction, or replacement of existing oil and gas production equipment located on the same site, or consists of the construction of new equipment or replacement equipment located on a different site.

Then the zoning of the property and Tier will determine if the project is in an area that uses the ministerial process or requires the processing of a Conditional Use Permit. Areas that require a CUP include parcels zoned: Estate (E), Low-Density Residential (R-1), Medium-Density Residential (R-2), High-Density Residential (R-3), Neighborhood Commercial (C-1), General Commercial (C-2), Highway Commercial (CH), Office Commercial (CO), Open Space (OS), Platted Lands (PL), and Mobilehome Park (MP). If a CUP is required, please contact Planning Staff for instructions and application requirements. The remainder of this Handbook covers only oil and gas activities on Tier 1-3 and 5 lands.

Once the existing or new status of the equipment included in the proposed activity has been determined, the applicant should determine the level of analysis and ministerial permitting required for the specific oil

and gas activity. Table 1.1 - Oil and Gas Conformity Review and Minor Activities Review, shows oil and gas activity and describes whether or not the county requires a permit for the activity.

Table 1.1 - Oil and Gas Conformity Review and Minor Activities Review

Activity	Conformity Review	Minor Activity Review	No Permit Required
Drilling & Completion			
Production Well (including cyclic steam production well) A well drilled to produce oil and or natural gas	✓		
Reworked Well	✓		
Injection Well A U.S. Environmental Protection Agency class 2 injection well into which fluids are injected rather than produced with the primary objective typically is to maintain reservoir pressure, conduct EOR operations or dispose of produced water or gas, including: steamflood, waterflood or gas injection	✓		
Observation Well A well for the purpose of observing parameters such as temperature, fluid levels and pressure changes	✓		
SB4-Regulated Activities An activity regulated under California Senate Bill 4 (SB4) designed to enhance oil and or gas production or recovery. SB4 activities do not include activities such as steam flooding, water flooding, cyclic steaming, routine well cleanout, well maintenance or removal of formation damage due to drilling, chemical treatments that do not meet the requirements in 584, bottom hole pressure surveys, or routine activity Sidetracking, Deepening, activities that do not affect the integrity of the well of the formation	✓		
Drilling Pit or Sump A drilling pit or sump that requires a permit from the Central Valley Water Quality Control Board	✓		

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Sidetrack Change in well type, perforate new or existing perforations in casing, run or remove or cement liners, place or drill out any plug (cement, sand, mechanical): essentially, any operation that permanently alters the casing of a well	✓		
Deepening To deepen or permanently alter the casing in a well. Altering includes actions that require a DOGGR permit	✓		
Exploration and Development			
Geophysical Survey or Drilling by Scientific Means Tests conducted to determine the extent of and presence of oil and natural gas reserves and whether the resources for development	✓ *	✓	
Well Pad Preparation Construction activity consisting of clearing and grading of a new surface disturbance to accommodate the well and drilling activity or ancillary facilities that may be required for oil and gas drilling and operations	✓ *	✓	
Access Road Construction New surface disturbance that occur during the construction of a new road or expansion that includes new surface disturbance	✓ *	✓	
Electric Distribution Line Applies to new surface disturbance that occur during the construction of an electrical distribution line or expansion that includes new surface disturbance	✓ *	✓	
Pipeline Applies to new surface disturbance that occur during the construction of a pipeline or expansion that includes new surface disturbance	✓ *	✓	
Production Operations			
Well Operations and Maintenance Not Requiring a DOGGR permit			✓
Geophysical Monitoring			✓
Oil/Gas Treatment	✓ *	✓	
Produced Water Treatment	✓ *	✓	
Well Testing			✓
Pipelines	✓ *	✓	
Electric Lines	✓ *	✓	

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Wastewater Treatment and Injection Disposal	✓ *	✓	
Wastewater Treatment and Surface Disposal	✓ *	✓	
Waste Treatment and Disposal	✓ *	✓	
Access Road	✓ *	✓	
Vegetation			✓
Reactivation of Idle Wells	✓ *	✓	
Support Facilities			
Administrative Building or Support Facility Building	✓ *	✓	
Steam Generator Boilers that generate steam for oil and gas field production purposes	✓ *	✓	
Flare A gas combustion device used primarily for burning off raw, waste, or unusable flammable gas that cannot be effectively commercialized	✓ *	✓	
Electric Lines Overhead or buried electrical distribution lines used for oil and gas field operations	✓ *	✓	
Electric Substations Electric substations used for oil and gas field operations	✓ *	✓	
Pipelines Pipelines that part of an oil and gas field operation	✓ *	✓	
Tanks Tanks used for oil field operations	✓ *	✓	
Oil/Water Treatment Oil/ water treatment equipment used in oil and gas operations	✓ *	✓	
Produced Water Treatment Equipment used to treat produced water in an oil and gas operation	✓ *	✓	
Produced Water Percolation Pond/Sump Produced water percolation and or evaporation ponds permitted by the Central Valley Regional Water Quality Control Board and used during oil and gas field operations	✓ *	✓	
Emergency Pit, Sump or Secondary Containment	✓ *	✓	
Fencing Fencing used to protect and prevent unauthorized individuals from coming into contact with oil and gas equipment and to prevent trespassing			✓

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Well Abandonment A DOGGR process to plug and abandon a well used for oil and or gas activities including production, observation, and injection.			✓
Revegetation The processes taken to establish vegetation at an oil and gas operation			✓
Short Term Employee Housing Short Term Employee Housing Temporary housing for individuals involved in oil and gas operations that require onsite 24 hour 7 day a week oversight	✓ *	✓	
Pre-Ordinance Activities that Cause New Ground Disturbance and/or Subject to the Emission Reduction Agreement	✓ *	✓	
Note: * - Ongoing operations of existing wells, facilities and equipment, including minor modifications such as new interconnections between such facilities, does not trigger conformity review or minor activity review. When these accessory uses, equipment and facilities are proposed as part of the same project as an activity that requires an Oil and Gas Conformity Review, then these accessory activities are required to be included in the Oil and Gas Conformity Review. In all other circumstances, where new ground disturbance occurs, these accessory activities are subject to Minor Activity Review.			

After reviewing the Table (Table 1.1) and determining the level of County analysis required under Chapter 19.98 of the Kern County Zoning Ordinance for the new oil and gas activity, the applicant will need to identify the applicable development standards and EIR mitigation measures for the new Oil And Gas Conformity Review or Minor Activity review in order to ensure the correct information and materials are submitted to the County for review.

Section 19.98.060 of the Kern County Zoning Ordinance details all development standards for oil and gas permitting, and Appendix B (MMRP) lists all EIR mitigation measures. While certain development standards and mitigation measures are applicable to all oil and gas activities, some development standards are specific to the physical placement (biological environment, proximity to sensitive receptors, level of ground disturbance, etc.) of the new oil and gas activity.

Oil and Gas Conformity Review Process

An Oil and Gas Conformity Review is a ministerial permit that is processed by Planning Staff according to specific timeframes and requires no public hearing. The permit application is available online at <http://pcd.kerndsa.com/planning/oil-gas-zoning-amendment> and can also be submitted in person/mail to the Kern County Planning and Natural Resources Department with appropriate fees.

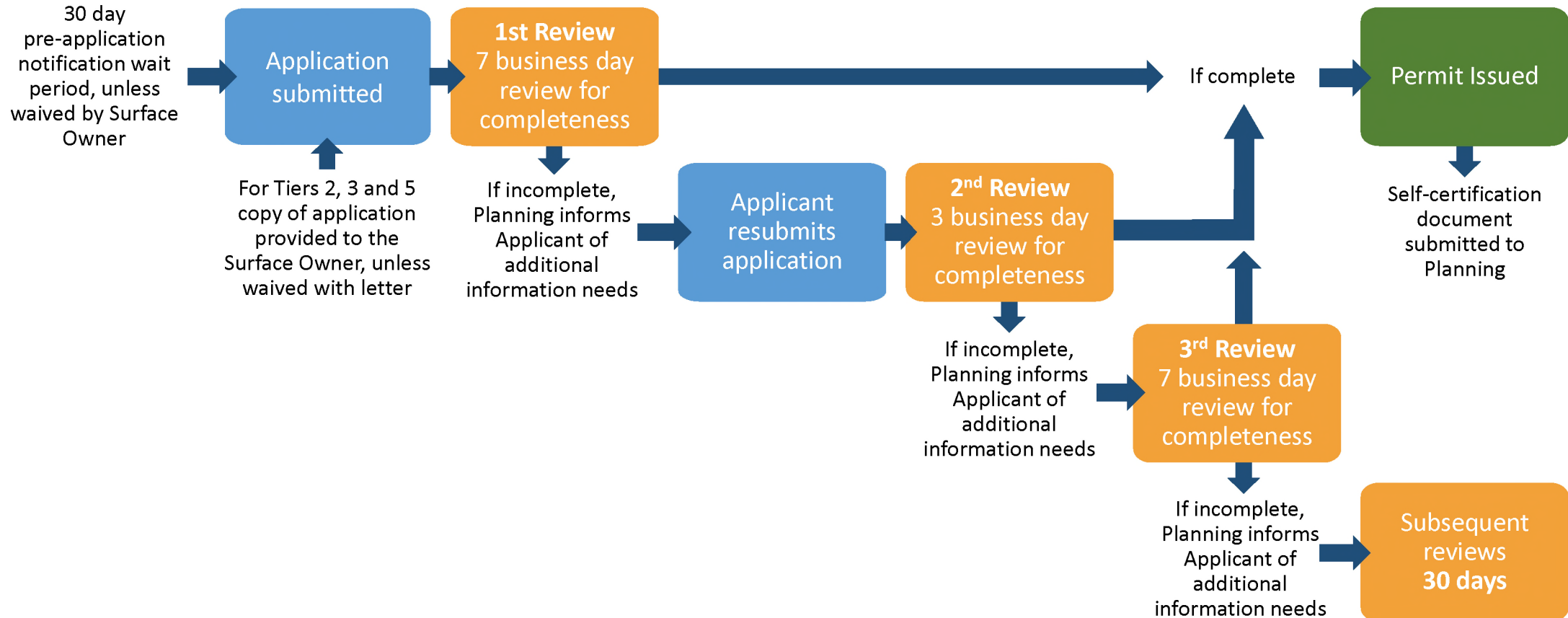
The pathway for processing an Oil and Gas Conformity Review is dependent on the ownership structure of the surface and minerals (split estate), the location, and in Tier 2, 3 and 5 whether a signature has been given from the surface/land owner. The following illustrates the process and review times for an Oil and Gas Conformity Review with the applicable signatures.

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OIL CONFORMITY REVIEW

TIER 1

TIERS 2, 3, and 5 with Surface Owner Sign Off

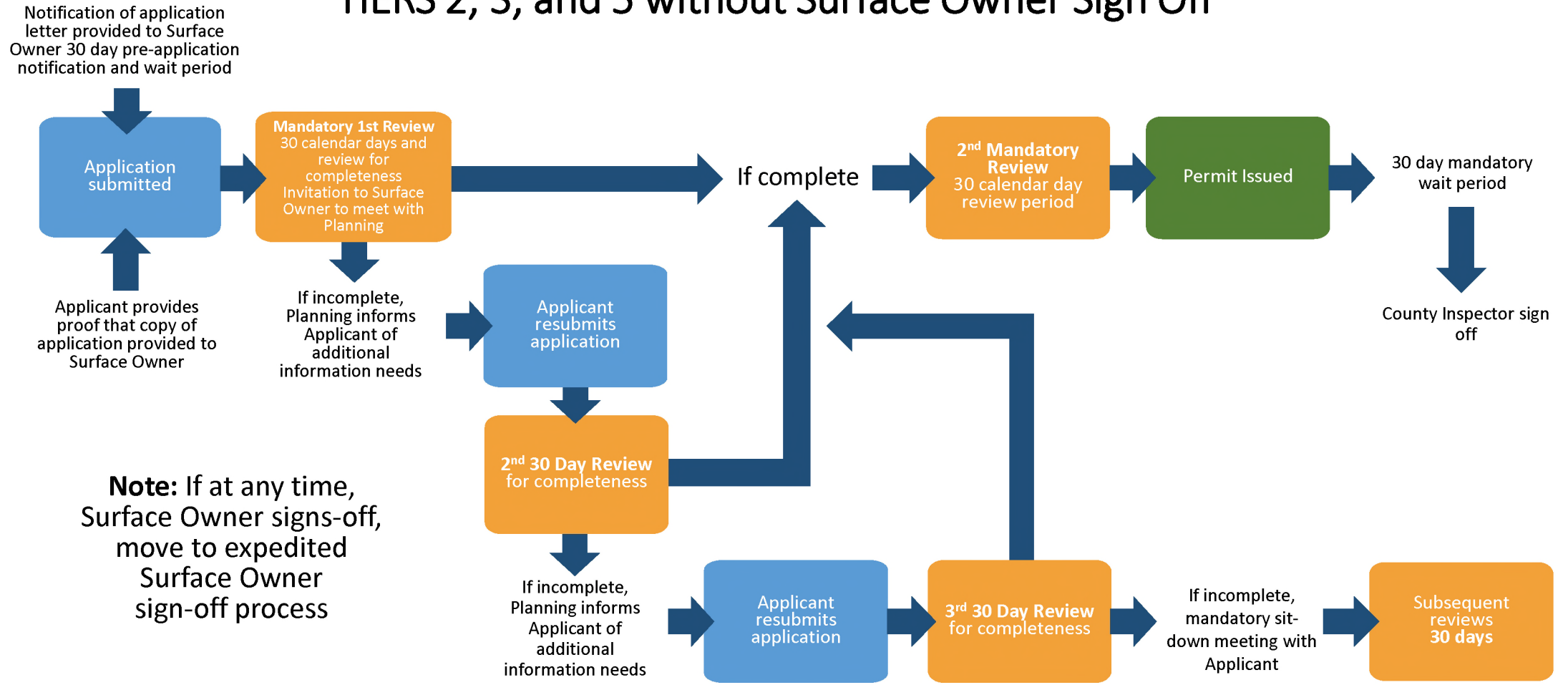


If the applicant does not submit a signature from the surface/land owner, within Tier 2 a different process is required. The following illustrates the process and review times for an Oil and Gas Conformity Review without the applicable signatures.

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OIL CONFORMITY REVIEW

TIERS 2, 3, and 5 without Surface Owner Sign Off

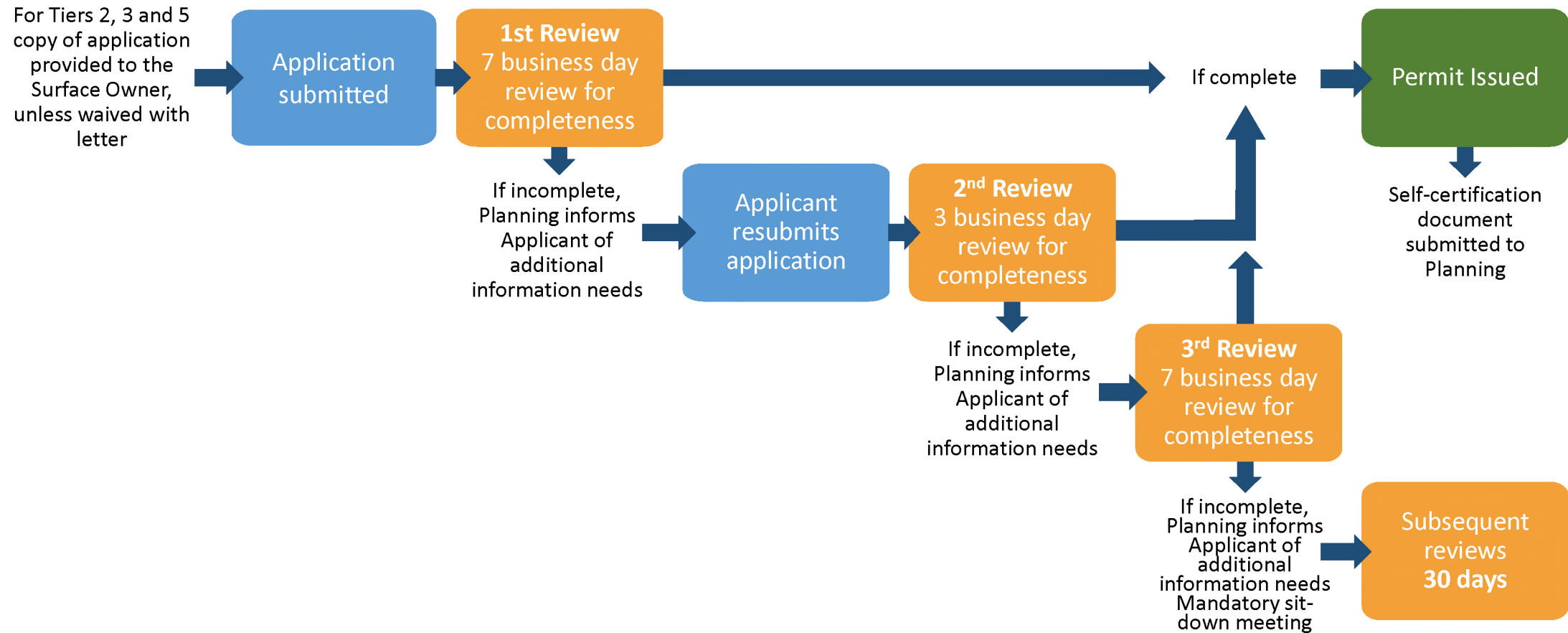


Minor Activity Review Process

The following illustrates the process and review times for a Minor Activity Review.

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Minor Activity Review



What should my Oil and Gas Conformity Review include?

All new oil and gas wells require analysis under the County's Oil and Gas Conformity Review, however, each OGCR requires an individual application that described the type of construction activities to be performed onsite and the location of the well. Every oil and gas conformity review must contain at minimum, the following:

1. Application

The application will require the following information:

- ☐ Contact information of the project applicant
- ☐ Contact Information of the property owner(s), mineral rights owner(s), and oil and gas operator (if different from the applicant)
- ☐ Assessor's parcel number(s)
- ☐ Physical description of the project area

2. Application Fee

3. Site plan

Please submit an 11x17 copy of the Oil and Gas Conformity Review site plan.

Section 19.98.080 of the Kern County Zoning Ordinance details the applications contents required for an Oil and Gas Conformity Review. The following checklist includes standard items that should be included on every OGCR submittal:

Site Plan Checklist

Tier 1

1. All applications must include a site plan no larger than 11x17 with multiple sheets (if necessary). The site plan must meet the following minimum criteria:
 - (a) Project boundary lines and dimensions, including lease lines and property lines.
 - (b) Location and coordinates of all proposed well holes and related accessory equipment. Location of all roadways, pipelines, tanks, treatment or other structures and facilities to be installed. Distance from proposed well holes to section/midsection lines, located within ½ mile.
 - (c) Location of all existing dwellings and structures, located within fifteen hundred and fifty (1,550) feet for all wells proposed to be drilled less than ten thousand (10,000) feet in depth or located within three thousand two hundred and seventy (3,270) feet, for all wells proposed to be drilled greater than ten thousand (10,000) feet in depth, of the proposed well holes. Identification of the use of each structure, and distances between well holes and existing buildings shall be noted. Location of existing property lines and distance from well site to property line.
 - (d) Location of all new flare gas production lines, lines for production, electrical lines, and location of tank farms to be used.

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- (e) North arrow, date the site plan was prepared, and scale.
 - (f) Location of all accessory/ancillary facilities (including truck parking, on-site storage, etc.) to be installed with the proposed wells.
 - (g) California Division of Oil, Gas and Geothermal Resources permit application number, if available.
 - (h) Identify the proposed source of water (domestic or production), if applicable.
 - (i) Show location of all proposed underground pipelines.
 - (j) Location of any existing Oil and Gas Conformity Review boundaries within and/or contiguous to the proposed boundary, including total site acreage and identification of Tier Area.
 - (k) Signature block for signature of Mineral Owner and/or Operator.
2. Submit written documentation in sufficient detail to allow the County to determine that all conditions required in Section 19.98.060 will be complied with, including all applicable mitigation measures as listed in the approved Mitigation Monitoring and Reporting Program for the Revisions to the Zoning Ordinance (C) – 2015.
 3. Submit evidence that notice was provided to Land/Surface Owners as required by Section 19.98.080 G.

Tier 2, 3, and 5

1. All applications must include a site plan no larger than 11x17 with multiple sheets (if necessary). The site plan must meet the following minimum criteria:
 - (a) Topography and proposed grading of the site plan.
 - (b) Project boundary lines and dimensions, including lease lines and property lines.
 - (c) Location and coordinates of all proposed well holes and related accessory equipment. Location of all roadways (access roads), any proposed landscaping, pipelines, tanks, treatment or other structures and facilities to be installed, and any existing or abandoned wells if such are known to exist.
 - (d) Location of all existing dwellings and structures, located within fifteen hundred and fifty (1,550) feet for all wells proposed to be drilled less than ten thousand (10,000) feet in depth or located within three thousand two hundred and seventy (3,270) feet, for all wells proposed to be drilled greater than ten thousand (10,000) feet in depth, of the proposed well holes. Identification of the use of each structure, and distances between well holes and

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existing buildings shall be noted. Location of existing property lines and distance from well site to property line.

- (e) Location of all new flare gas production lines, lines for production, electrical lines, and location of tank farms to be used.
 - (f) North arrow, date the site plan was prepared, and scale.
 - (g) Location of all recorded easements on site, roads, section/midsection lines, located within 1/2 mile of the proposed wells.
 - (h) Location of all accessory/ancillary facilities (including truck parking, on-site storage, etc.) to be installed with the proposed wells. Location of planned ground disturbance on irrigated or prime agricultural land.
 - (i) Description of project boundary in relation to Tier areas as defined in Figure 19.98.015.
 - (j) California Division of Oil, Gas and Geothermal Resources permit application number, if available.
 - (k) Identify the location of the 100-year floodplain, if applicable.
 - (l) Identify the proposed source of water (domestic or production), if applicable.
 - (m) Show location of all new proposed underground pipelines.
 - (n) Location of any existing Oil and Gas Conformity Review boundaries within and/or contiguous to the proposed boundary.
2. Preliminary Title Report, not over ninety (90) days old. A Guarantee of Title may be submitted for parcels with a Preliminary Title Report on file, over (90) days old.
 3. Submit written documentation in sufficient detail to allow the County to determine that all conditions required in Section 19.98.060 will be complied with, including all applicable mitigation measures as listed in the approved Mitigation Monitoring and Reporting Program for the Revisions to the Zoning Ordinance (C) – 2015.
 4. Submit evidence that notice was provided to Land/Surface Owners as required by Section 19.98.085.H.
 5. Signature Block and Statement (Land/Surface Owner, Mineral Owner, and Operator).
The following statement shall be included ~~to~~ on the first page of the site plan. The statement shall be signed by all parties, irrespective of ownership relationship. Multiple lines may be added for multiple ownership signatures. A dated letter of authorization, with specific Assessor Parcel Numbers, from the Land/Surface Owner addressed to the County of Kern may be submitted asking that the signature on the site plan be waived.

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REQUIRED STATEMENT

The undersigned Land/Surface Owner is the owner of APN#_____. The undersigned is the Mineral Owner and/or Operator or Lessee of the Mineral Owner. The Land/Surface Owner and the Mineral Owner and/or the Operator or Lessee have come to an agreement regarding the use of the surface of the property in connection with the Kern County permit that is being issued with this site plan.

Land/Surface Owner:

Mineral Owner:

Operator:

Print Name

Print Name

Print Name

Title/Company

Title/Company

Title/Company

Signature

Signature

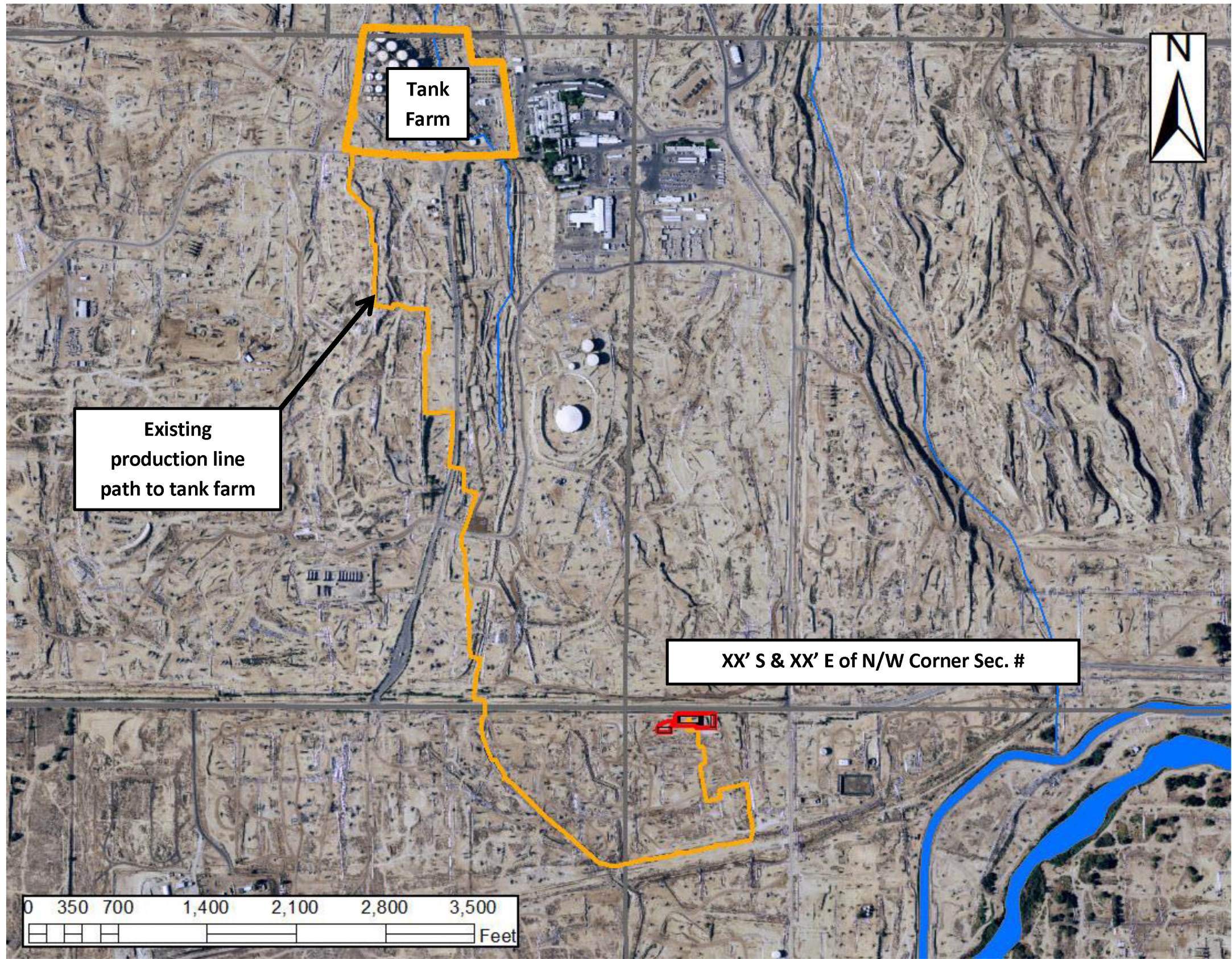
Signature

Date

Date

Date

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- Notes:**
- a) Project Boundary Lines and dimensions are indicated on the map
 - b) Well Coordinates: X:1707xxx.000, Y:702yyy.000 (NAD27)
 - a. No roadways, pipelines, tanks, treatment or other structures and facilities are to be installed
 - b. Distance from proposed well hole to section/midsection lines located within ½ mi: XX' S & XX' E of N/W Corner Sec. #
 - c) There are no existing dwellings and structures, located within 1,550' (drill depth is less than 10,000'). Distance to property lines is noted on the map.
 - d) No new flare gas production lines, lines for production, or electrical lines are being installed. The location of tank farm to be used is shown along with the existing pipeline from project to tank farm
 - e) Location of all accessory/ancillary facilities (including trucking parking, onsite storage, etc.) to be installed are shown on map.
 - f) DOGGR Permit Number: Not Yet Requested
 - g) Source of water: Fresh water produced from xxxx reservoir
 - h) No proposed underground pipelines are shown
 - i) No existing Oil and Gas Conformity Review boundaries within and/or contiguous to the proposed boundary, including total site acreage is indicated.

Project Name:	Rework Well		
Regional Site Plan View – Tier X Area			
Date Prepared:			
Company Address			
Field and Section	Page 1 of 3		
Operator Signature:	Surface Owner Signature:		

LEGEND

NEW GROUND DISTURBANCE

FOOT PRINT – RIG, BACKYARD, PARKING, OFFICES/HOUSING

ELECTRICAL LINES

PIPELINE/FLOWLINES (AG)

UNDERGROUND FLOWLINES

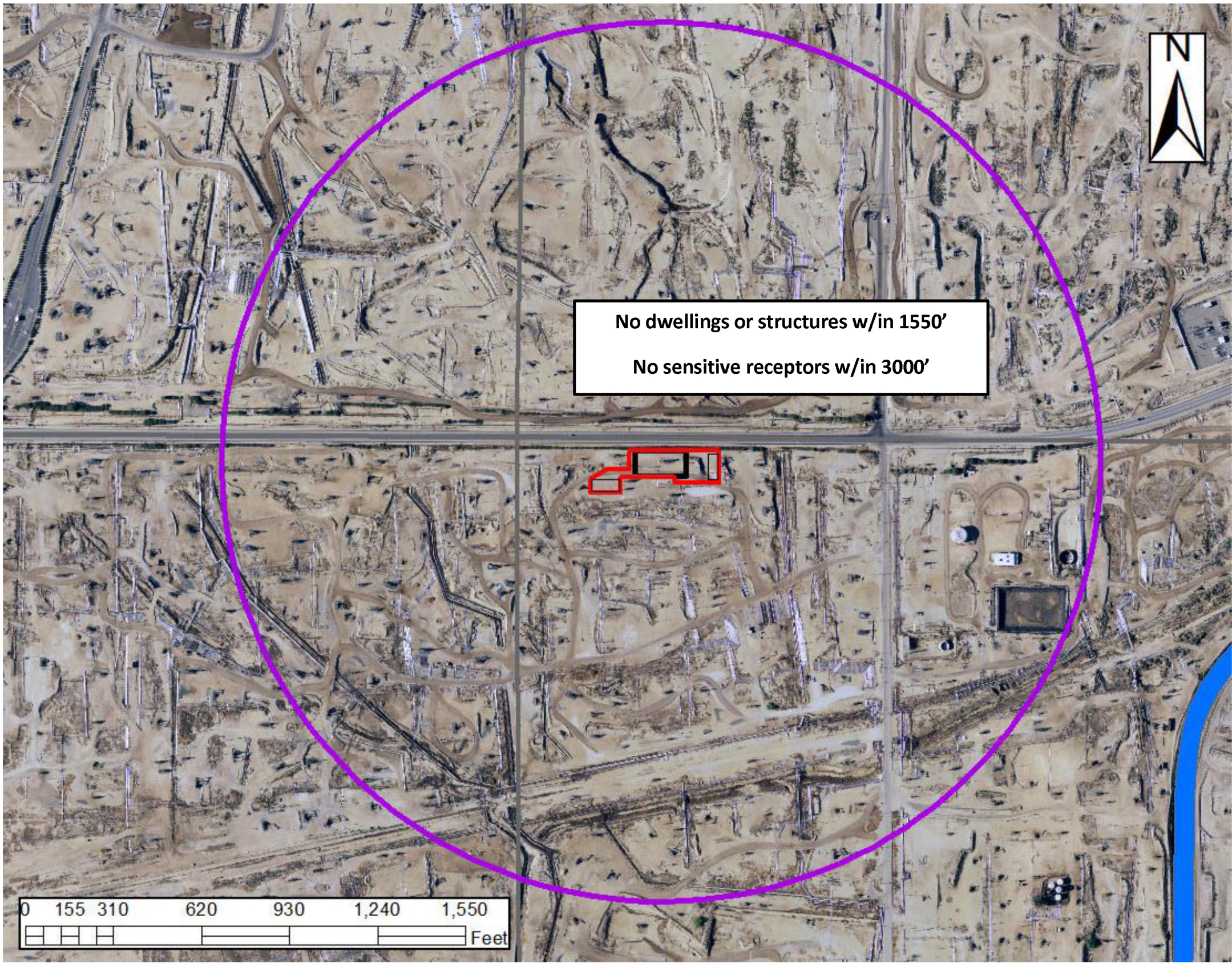
PROJECT BOUNDARY LINE

BLUE LINES

LEASE LINES/SECTION/PROPERTY

MIDSECTION LINES

CONFORMITY REVIEW ALREADY COMPLETE



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Project Name: Rework Well	
Vicinity Site Plan View – Tier X Area	
Date Prepared:	
Company Address	
Field and Section	Page 2 of 3
Operator Signature:	Surface Owner Signature:

LEGEND

NEW GROUND DISTURBANCE

FOOT PRINT – RIG, BACKYARD, PARKING, OFFICES/HOUSING

ELECTRICAL LINES

PIPELINE/FLOWLINES (AG)

UNDERGROUND FLOWLINES

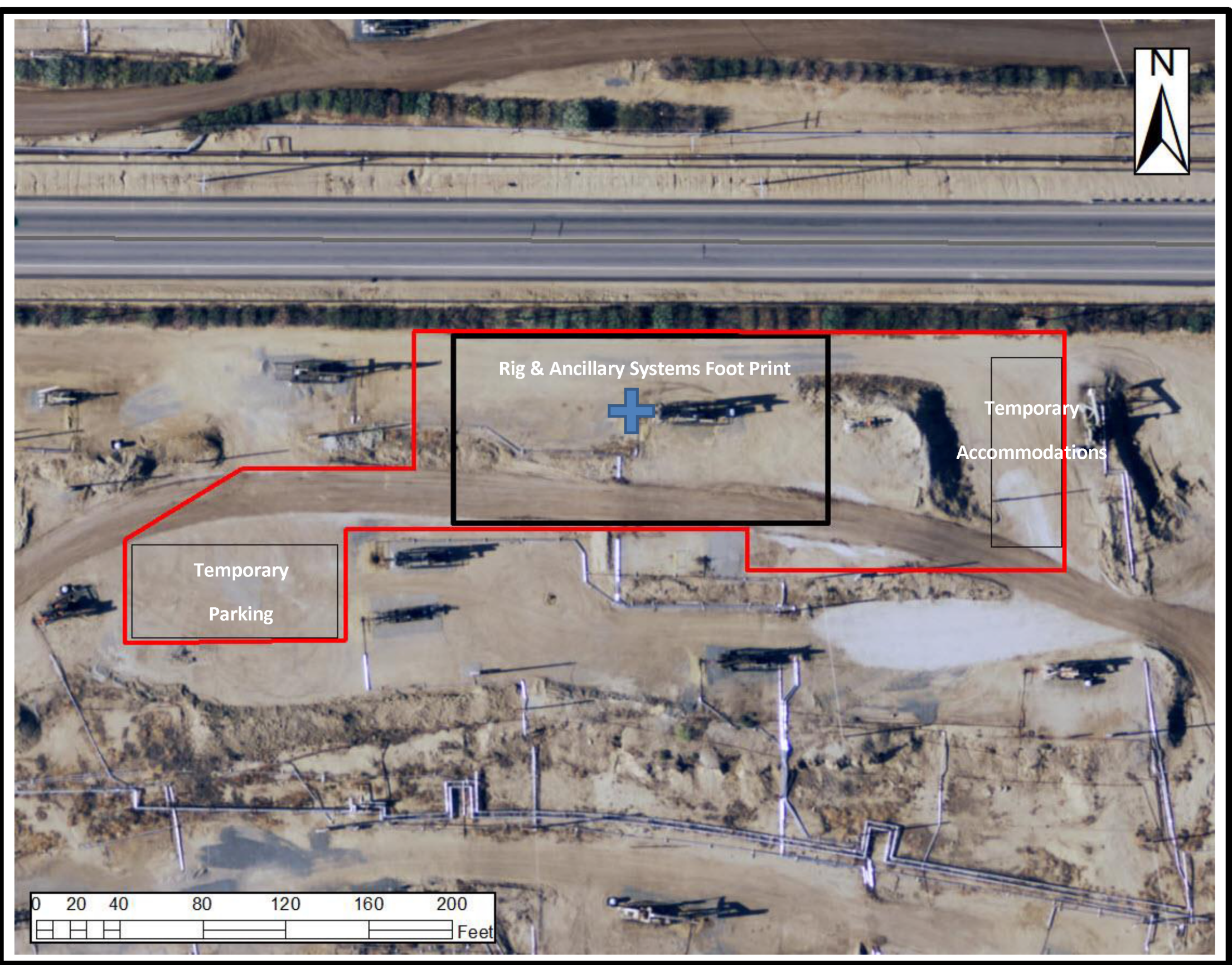
PROJECT BOUNDARY LINE

BLUE LINES

LEASE LINES/SECTION/PROPERTY

MIDSECTION LINES

CONFORMITY REVIEW ALREADY COMPLETE



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Project Name: Rework Well	
Detailed Site Plan View – Tier X Area	
Date Prepared:	
Company Address	
Field and Section	Page 3 of 3
Operator Signature:	Surface Owner Signature:

LEGEND

NEW GROUND DISTURBANCE

FOOT PRINT – RIG, BACKYARD, PARKING, OFFICES/HOUSING

ELECTRICAL LINES

PIPELINE/FLOWLINES (AG)

UNDERGROUND FLOWLINES

PROJECT BOUNDARY LINE

BLUE LINES

LEASE LINES/SECTION/PROPERTY

MIDSECTION LINES

CONFORMITY REVIEW ALREADY COMPLETE

What should my Minor Activity Review include?

Every Minor Activity Review must contain at minimum, the following:

1. Application

The application will require the following information:

- ☐ Contact information of the project applicant
- ☐ Contact Information of the property owner(s), mineral rights owner(s), and oil and gas operator (if different from the applicant)
- ☐ Assessor's parcel number(s)
- ☐ Physical description of the project area

2. Application Fee

3. Please submit an 11x17 copy of the site plan (If needed to show compliance with applicable implementation standards and mitigation measures).

Frequently Asked Questions

Does the Oil and Gas Conformity Review or Minor Activity Review Expire?

The Oil and Gas Conformity Review or Minor Activity Review approval is valid for one (1) year after the date of issuance. The project applicant may request a one year extension of the OGCR or MAR approval. After the one year period and up to a one year extension, the OGCR or MAR approval has expired a new Oil and Gas Conformity Review or Minor Activity Review will need to be processed for the oil and gas activity. Once the activity authorized by the OGCR or MAR is constructed the permit is valid for the life of the well or other equipment as long as it remains in full compliance with all requirements of approval.

What other permits might I need? How do all these permits relate to the County Permit?

The Oil and Gas Conformity Review and Minor Activity Review approval provides local zoning/land use approval for the oil and gas related activity. The Kern County Planning and Natural Resources Department is not the only governmental agency with oversight on oil and gas activities and therefore, other required permits will continue to be required under other applicable laws. While the Zoning Ordinance Implementation Standards already require consultation with other agencies prior to submittal of the Oil and Gas Conformity Review application, it may be beneficial to consider contacting the following State and local agencies regarding the permits necessary for oil and gas activities.

- California Division of Oil, Gas, and Geothermal Resources (DOGGR) - oversees subsurface operations of oil, gas and injection wells, well exploration, drilling and construction, well testing, well completion, stimulation, workovers, oil and gas operations and maintenance, well removal, plugging and abandonment.
- San Joaquin Valley Air Pollution Control District - oversees air quality permitting as well as regional air quality planning and regional programs.
- Central Region of the Regional Water Quality Board - oversees permitting for discharges of wastewater and produced water, management of stormwater, as well as water basin planning and other water regulatory programs.

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- California Department of Fish and Wildlife (CDFW) - oversees permitting for activities that may result in the incidental take of protected wildlife and plant species, as well as regional and sub-regional habitat conservation planning and permitting.
- California Department of Toxic Substances Control (DTSC) - oversees hazardous waste management and the cleanup of non-petroleum spills and releases.
- California Department of Resources, Recycling, and Recovery (CalRecycle) - oversees certain types of solid waste management and recycling activities.
- California Department of Transportation (Caltrans) - oversees construction and maintenance of state highways.
- Kern County Water Agency and other water districts - oversee the distribution and use of surface and groundwater resources
- Federal agencies, such as, the U.S. Corp of Engineers, U.S. Fish and Wildlife Service and the Bureau of Land Management may have required permits on certain lands.

I want to drill a well and then use Enhanced Oil Recovery methods or well stimulation methods regulated by Senate Bill 4 (SB4) in the future. Can I do this up front with my Oil and Gas Conformity Review?

Yes. When you apply for an Oil and Gas Conformity Review please include any and all proposed accessory structures and any planned or potential future well stimulation activities to be performed on the Oil and Gas well immediately or in the future. When an Oil and Gas Conformity Review approval is issued for any well stimulation activity (SB4 Activity), the approval will include an invoice to pay the appropriate fees prior to conducting the well stimulation activity. If you decide that the stimulation activity is not needed, you may be entitled to a refund of the permit fees directly associated with that SB4 activity. Furthermore, if you prefer to wait and submit new proposed SB4 activities on a well as they become necessary you may file a new application for the SB4 activity in the future, through a new Oil and Gas Conformity Review.

Can I submit for multiple wells on a single Oil and Gas Conformity Review?

Submitting an application that includes multiple new wells and ancillary facilities on a single site is acceptable and encouraged. The fees for an Oil and Gas conformity Review will be charged for each new well; however, ancillary facilities and well stimulation activities, submitted in-conjunction with an OGCR, will not be charged additional Minor Activity Review fees.

I have an existing well and ancillary facilities that were permitted prior to the Zoning Ordinance Revision adoption, can I rework this existing well or replace facilities?

Yes. Any well that was legally drilled prior to the Zoning Ordinance Revision adoption can be replaced or reworked. An Oil and Gas Conformity Review application would be required for any replacement, reworking, deepening or side-tracking activities; however, replacement of other equipment that does not result in new ground disturbance, would not require any new permit approvals. Replacement or expansion activities requiring new ground disturbance will need to go through a Minor Activity Review and will be subject to the mitigation measures laid out in the Zoning Ordinance and adopted Mitigation Monitoring and Reporting Program.

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When is a Minor Activity Review Required?

A Minor Activity Review (MAR) is required for activities listed in Table 1.1, above, that are not ongoing operations of existing wells, facilities and equipment. Activities and minor modifications, such as new interconnections between facilities, do not trigger a Minor Activity Review. Examples of activities that would not require a MAR, include: temporary placement of tanks (with no foundation) in conjunction with a permitted or nonconforming well; connection of two or more existing facilities via an above- or below-ground pipeline; installation of a new above-ground pipeline on an existing pipe rack or within an existing pipeline corridor; or replacement of existing facilities within the same footprint. For all other activities listed in Table 1.1, a Minor Activity Review would be required.

Can a permit be returned for a refund?

A permit is not eligible for a refund, however, any funds that have been contributed to mitigation for the unconstructed oil and gas facility can be refunded or held in an account for the applicant to use as mitigation for future mitigation for an Oil and Gas Conformity Review or Minor Activity Review.

I have new proposed Oil and Gas Activity(s) on a location/well already approved with an OGCR, can I modify my old OGCR?

Upon approval of the initial Oil and Gas Conformity Review for a project site, the operator receives County approval for the proposed activities included in that approval.

In the future, if the operator would like to add additional ancillary facilities, stimulate the well or perform additional oil and gas activities on the project site the applicant must apply for County approval of a new Oil and Gas Conformity Review or a Minor Activity Review, depending on the activities requested and review of Table 1.1.

Every OGCR will be issued a well identification number and a stamped site plan. Upon the County issuance of the initial Oil and Gas Conformity Review for a project, the county will store the application and approval in the “well life cycle” holding pattern. Should the applicant wish to amend the proposed activities or add additional facilities to the approved OGCR, the applicant can access their previous application online. They will have the option to bring the OGCR out of the “well life cycle” holding pattern and re-submit the new information for review. Any new disturbances caused by the proposed new oil and gas activity will need to be in full compliance with the development standards set forth in 19.98 and applicable mitigation measures; however, if the site has already been mitigated for certain development standards and there is no increase in the impact to the site the applicant will simply need to provide proof of the previous mitigation.

Can a “Responsible Agency” under CEQA use the certified EIR even if the activity in question does not require a “Permit” from Kern County?

Yes. The certified EIR that was used to adopt the Zoning Ordinance Revisions took into account all new activity from oil and gas exploration and operations, with the exception of new or expanded cogeneration facilities, large new remediation activities, new landfills, habitat enhancement or restoration activities, other than oil and gas activities, that occur in the San Joaquin Valley, new diversions or distributions of local surface waters for uses not addressed in Chapter 4.9 of the EIR, construction of new transmission lines, construction of distribution pipelines (i.e., pipelines intended to transport crude oil to an oil refinery), injection wells other than Class II injection wells, and improvements, expansions, or modifications to existing refineries or storage distribution facilities. Most but not all of these activities require a new

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ministerial permit from Kern County under the OGCR or MAR process, some require a Conditional Use Permit, and very minor activities as listed in Table 1.1 do not require a County permit. Regardless of the Kern County permit process, any “Responsible Agency” under CEQA can use the certified EIR as the required CEQA documentation for their approvals.

I have a site and well pad proposed; however, once drilling operations commence, I may need to move the well-hole location a few feet, can I do this?

Yes. DOGGR rules currently allow for well-holes to be moved up to 50 ft without resubmitting for a new permit. When submitting for an OGCR, an applicant should show a 50 ft ring around their proposed well-hole. All mitigation implementation should take this into consideration. This includes distances for noise and health risks, along with biologically sensitive areas. These distances should be measured from the nearest point of the ring and not from the proposed well-hole location.

How will I know which mitigation measures apply to my permit?

There are two ways to determine which mitigation measures will apply. Generally, all mitigation measures apply to all permits; however, there are some exceptions. These exceptions are the mitigation measures for fees associated with new wells, and mitigation measures that apply only in specific Tiers, and mitigation measures that apply only when specific site circumstances exist.

First, for mitigation fees, if an applicant is only submitting for a Minor Activity Review and not drilling a new well, then certain mitigation fees will not apply, as they are calculated for all impacts and charged to new wells only.

Second, some mitigation measures apply only to specified tiers (e.g., Tier 2 lands), and are not be required for permits issued in other Tiers. The mitigation measures for Tier 2 lands only apply in that Tier, and will not be required for permits issued in other Tiers.

Third, some mitigation measures apply only when specific site circumstances exist (e.g., proximity to a house or other sensitive receptor, or sites with steeper slopes). As an applicant, a complete package should include the MMRP in Appendix B, with documentation for each measure. A note should be added for measures that are not applicable, with County Staff being able to confirm. When the County issues an Oil and Gas Conformity Review or Minor Activity Review approval, the applicant will receive a stamped site plan and attached Mitigation Monitoring and Reporting Program (MMRP). This MMRP will highlight all mitigation measures that will need to be complied with prior to -, during-, and post-construction.

What will I need to submit with my application?

- First, the application form. This form will need to be completed and signed by all applicable parties.
- Second, for OGCRs a detailed site plan. If the proposed site is within Tier 2, 3 or 5, a signature will need to be provided by the land/surface owner in order to continue with the expedited review process.
- Third, all necessary mitigation measure compliance documentation. This information may come in the form of a report, written letter from the applicant, or placed as notes on the site plan, depending on the information needed.
- There are typically three types of mitigation measure “triggers”. These include: prior to issuance of the permit, prior to construction activities, and during operations. For all “Prior to Issuance” mitigation measures, the applicant will need to provide necessary information to allow County Staff

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to complete their review. For “Prior to Construction” mitigation measures, the applicant will need to place a note on the site plan explaining how and when they will comply. This note method will also be required for all “During Construction” mitigation measures.

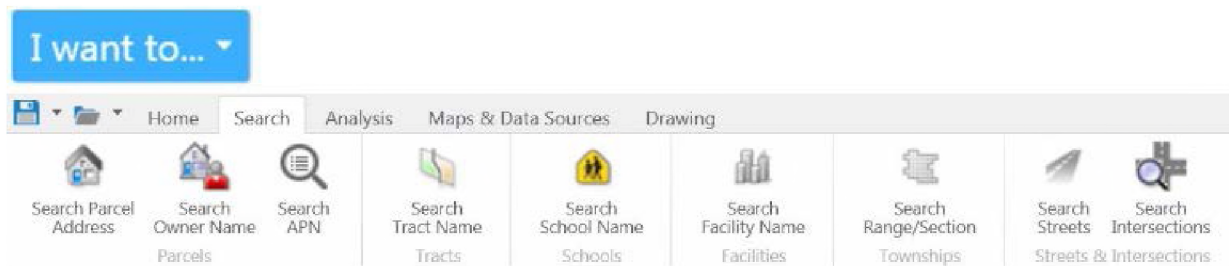
Oh NO!!! I have an emergency at one of my sites and need to fix it immediately, what do I do?

First, call all necessary emergency response agencies and appropriate regulatory agencies. Then, once any immediate danger is minimized, call the Planning and Natural Resources Department at (661) 862-8641 and leave a detailed message regarding the location and emergency. Staff will follow up as soon as possible with any information needed to assist in the situation and coordinate with local, State and federal agencies, along with any additional documentation the Department might need regarding the incident.

Appendix A - Online GIS Mapping System Guide

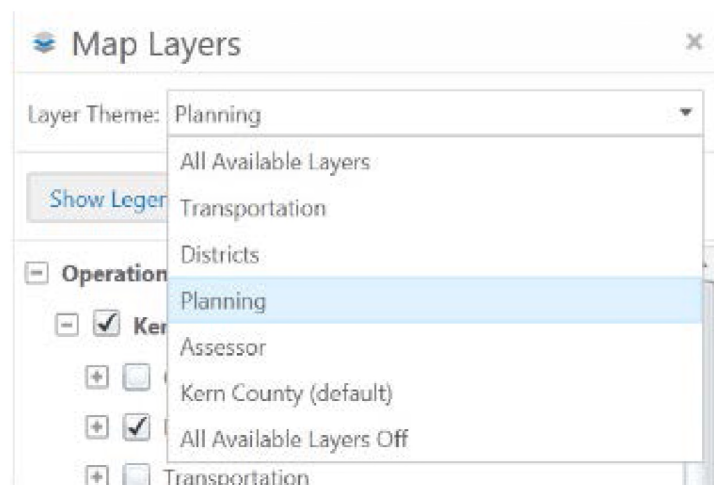
The online GIS Mapping System can be accessed online at <http://esps.kerndsa.com/gis/gis-disclaimer/9-uncategorised/316-gis-mode-selection>. The GIS Mapping System is an excellent tool to review a property's zoning classification and Tier classification. This is a quick tutorial on some of the most common functions of the Online GIS Mapping System.

1. **Find my property** - The first thing you will want to do in the GIS Mapping System is locate your property. One way to locate to property without zooming in is to search it. Use the “I want to...” button located in the upper left corner of the map or go to the Search tab located in the tool bar. A property can be located by its parcel address, APN, tract name, school name, township/range/section, street, and street intersection.



2. **Data Layers**- A GIS tool contains multiple map layers that can be piled on top of one another to provide more information about a property. The default layers on the Online GIS Mapping System is a topographical map. Additional map layers can be added to the base layer to provide more information about the parcel.

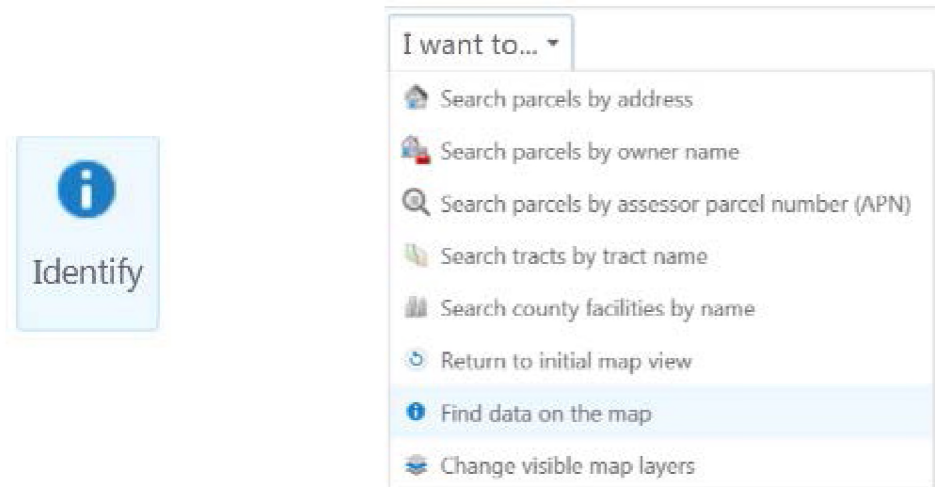
The Mapping Layers are located on the left side of the browser and categorized with a drop-down menu under different categories called “operational layers”. The Layer Theme allows you to toggle between different category themes which will give you different mapping layer options. See the image below.



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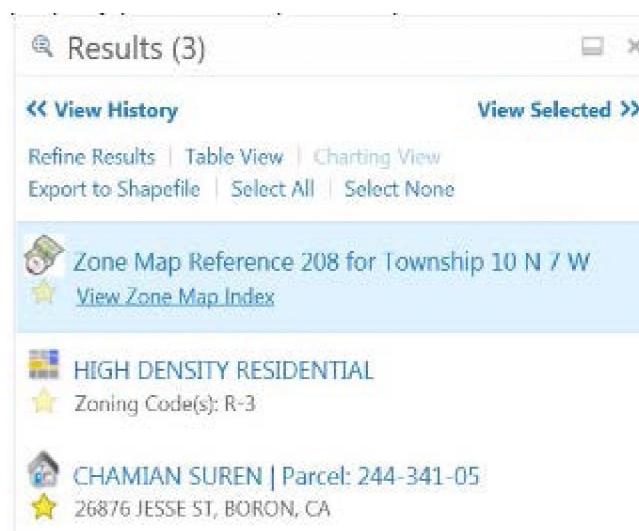
The Oil and Gas Conformity Tier Map layer is located in the Planning Layer Theme, under the Planning Operational Layer. (Press [+] to expand the category). In order to add the layer to the map, check the box to the left of the layer. It may take a few minute to load.

3. **Identify Information about the Map Layer.** Use the “I want to ...” button and click on Find Data on the map or go to the Maps and Data Sources tab located in the toolbar. Click on the Identify button. See below.



Once you have used one of the methods described above to turn on the identify layer, you can click on the portion of the map you are interested in learning more about, and the available information from the map layers will be displayed in the Results window located on the left side of the browser.

For example, if the Parcels, County Zoning and Zone Map layers are turned on, the following results would be on the left side. The results can be clicked on to provide more information such as links to maps or the Assessor’s Property profile page.



The Identify tool is useful for identifying the Tier level for a specific project.

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Appendix B – Mitigation Monitoring and Reporting Plan

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Exhibit C Mitigation Monitoring and Reporting Program for Kern County Gas & Oil Zoning Ordinance Environmental Impact Report

Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Date	Initials
4.1	Aesthetics				
4.1-3	MM 4.1-1 The Applicant shall use existing roads to access oil production areas, or shall construct new roads (or extend existing roads) to minimize the amount of disturbance without impeding existing surface use.	Delineated on Site Plan; During construction and operation	(KC PCDD)		
		Steps to Compliance: A. The Applicant shall implement measures related to use of access roads as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.1-2 All derricks, boilers, and other drilling equipment used to drill, repair, clean out, deepen or redrill any well with oil, gas, or other hydrocarbon shall be removed from the drill site within 90 days after completion of production tests or after abandonment of any well. Earthen sumps used in drilling shall be filled within 90 days after any well has been placed in production (unless such sumps are to be used within six months for the drilling of another well), and any sump used in productions shall be filled after its abandonment and restored to a uniform grade within ninety days.	During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.1-3 Sumps and ponds shall be permitted only to the extent authorized by the Central Valley Regional Water Quality Control Board (via waiver, Waste Discharge Requirements, or other form of authorized written documentation) and shall comply with all applicable legal requirements and mitigation measures for sumps serving as storage, percolation or evaporation ponds for produced water.	Delineated on Site Plan; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.1-4 Except where located within agricultural land, new oil or gas tanks located within 200 feet of any sensitive receptor shall be partially screened from public view by shrubs, trees or solid screen fencing. Similarly, new pump sites (including multiple well pump sites) within 500 feet of any dwelling must be surrounded by a fence, at least 6 feet in height, constructed of dark-colored chain-link with wood or metal slates, dark green or brown fabric material, or other more visually restrictive fencing material. The height of all new pumping units shall not exceed 80 feet, and shall be painted in accordance with the Kern County Zoning Ordinance.	Delineated on Site Plan; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.1-5 Project signage is limited to directional, warning, safety, security and identification signs in connection with oil, gas, or other hydrocarbon drilling and development operations in accordance with Chapter 19.84.135 of the Kern County Zoning Ordinance. For any signage necessary for wayfinding, safety, or security, the Applicant shall use the minimum necessary to adequately communicate the required information.	Delineated on Site Plan; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
4.1-4	MM 4.1-6 Permanent nighttime lighting that will be installed for new facility operations will only be lighting required for safety or security. During operations when the lighting is in use, lighting for safety and security will be shielded and oriented downward, bare bulbs will be fully screened from view from sensitive viewing receptors such as residences, and on-demand lighting and/or timers will be used to minimize visual impacts of lighting. In doing so, the Applicant shall comply with the standards in the amended Chapter 19.81 – Outdoor Lighting “Dark Sky Ordinance.”	Delineated on Site Plan; During operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
Agricultural Resources					
	MM 4.2-1 For new oil and gas exploration and extraction activities that are: 1) on land designated Prime, Farmland of Statewide Importance or Unique Farmland; and 2) that have been actively farmed 5 years or more out of the last 10 years, agricultural land mitigation is required at a ratio of 1:1.	Delineated on Site Plan; Prior to Issuance of Oil and Gas Conformity or Minor Activity Review Permit	KC PCDD		
	The 1:1 ratio is applied to actual ground disturbance area for oil and gas activities (inclusive of temporary construction and permanent operational impact areas), but excludes non-farmed existing areas such as roads, and tank and maintenance areas, and lands for which agricultural mitigation has previously been provided at a 1:1 ratio. Prior to ground disturbing activity, the Applicant shall submit to the County written evidence of completion of one or more of the following measures to achieve this 1:1 mitigation ratio:	Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			

4.2-1	a. Funding and/or purchasing agricultural conservation easements or similar instrument acceptable to the County (to be managed and maintained by an appropriate entity). b. Purchasing of credits for conservation of agricultural lands from an established agricultural farmland mitigation bank or an equivalent agricultural farmland preservation program managed by the County. c. Restoring agricultural lands to productive use through the removal of legacy oil and gas production equipment, including well abandonment and removal of surface equipment. d. Participating in any agricultural land mitigation program adopted by Kern County that provides equal or more effective mitigation than the measures listed above. Mitigation lands shall meet the definition of Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland, and be of similar or higher agricultural quality as the lands, as established by the California Department of Conservation. Completion of the selected measure or, with the Kern County Planning and Community Development Director's approval, a combination of measures, are to occur on qualifying land in Kern County. If qualifying lands cannot be found in Kern County, upon written application to the County, the mitigation lands may be located within the San Joaquin Valley (San Joaquin, Stanislaus, Merced, Fresno, Madera, Kings, Tulare, or Kern County) or outside the San Joaquin Valley with written evidence that the same or equivalent crops can be produced on the mitigation land. Mitigation consisting of removal of legacy equipment within active agricultural fields shall not require recordation of an agricultural conservation easement or conservation easement. Available mitigation funding shall be prioritized for acquisition of large blocks of agricultural land for preservation, and removal of legacy equipment, to minimize and mitigate fragmentation and edge impacts.
4.2-5	MM 4.2-2 To protect crops and structures adjacent to oil and gas activities on active agricultural lands, each Applicant/operator shall comply with the following mitigation measures set forth in other chapters of this Environmental Impact Report: a. Surface water runoff and drainage on the well pads shall be mitigated as described in mitigation measures for Hydrology and Water Quality. b. A Spill Prevention Countermeasure and Contingency Plan or Division of Oil Gas and Geothermal Resources Assembly Bill 1960 spill plan, as applicable, shall be prepared for the site and oil and chemical spills treated in accordance with the Division of Oil Gas and Geothermal Resources Senate Bill 4 Regulations for the site to protect adjacent farmland, as described in mitigation measures for Hazards. c. Speed limits for oil and gas trucks shall be posted on unpaved roads to reduce dust generation; in the absence of signage, speed limits shall be limited to 25 miles per hour (or an alternate, more stringent dust suppression standard as adopted by the San Joaquin Valley Air Pollution Control District), and Applicants shall attest that employees have been trained in the appropriate speed limits. d. Unpaved roads shall be watered or otherwise treated for dust suppression and control as described in Mitigation Measure for Air Quality, unless speeds are restricted to 15 mph. e. Vehicle tracking control shall be installed where unpaved roads intersect with public paved roads, to prevent tracking of mud, dust, and weed seeds off site, unless speeds are restricted to 15 mph. This shall consist of a 50-foot length of a 3 inch-thick layer of gravel one inch or larger in diameter (or an alternate, more stringent dust suppression technique as approved by the San Joaquin Valley Air Pollution Control District). f. Stormwater control shall be required at construction sites during well drilling, reworking, and/or decommissioning as described in mitigation measures for Hydrology. g. Hazardous materials shall be stored within secondary containment as described in mitigation measures for Hazards. h. Overhead electrical or communication lines shall be shown on the Site Plan, and shall be aligned to the greatest extent feasible with existing access roads and the minimum distance between the access road and the well installation or other oil and gas facility, parallel to tree or row crops, described further in mitigation measures for Public Utilities. If the use of existing roads is not feasible, lines shall be routed to minimize surface disturbance and minimize the impacts to surface activity. i. Underground pipelines serving the Project shall be shown on the Site Plan with locations marked and recorded with USAA, and periodically inspected and maintained as described in mitigation measures for Hazards.
Air Quality	
	MM 4.3-1 Consistent with the requirements of the San Joaquin Valley Air Pollution Control District Regulation II-Permits, the Applicant shall obtain an Authority to Construct permit and a Permit to Operate for any facility or equipment requiring a permit from the San Joaquin Valley Air Pollution Control District, such as stationary sources required to obtain permits pursuant to District Rule 2010. All emissions increases from permitted equipment shall comply with District Rule 2201. MM 4.3-2 The Applicant shall develop and implement a Fugitive Dust Control Plan in compliance with San Joaquin Valley Air Pollution Control District fugitive dust suppression regulations to further reduce emissions, during construction, of particulate matter that is 10 microns or less and 2.5 microns or less in diameter. The Fugitive Dust Control Plan shall include: a. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan. b. Description and location of operation(s). c. Listing of all fugitive dust emissions sources included in the operation.

Delineated on Site Plan; Prior to Issuance of Oil and Gas Conformity or Minor Activity Review Permit	KC PCDD		
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Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
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Prior to Issuance of Oil and Gas Conformity or Minor Activity Review Permit	San Joaquin Valley Air Pollution Control District; KC PCDD		
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Steps to Compliance: A. The Project Proponent shall submit an application to obtain Authority to Construct permit and Permit to Operate; B. The San Joaquin Valley Air Pollution Control District will review and approve prior to issuance of the permits.			
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Prior to Issuance of Oil and Gas Conformity or Minor Activity Review Permit	KC PCDD		
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Steps to Compliance: A. The Project Proponent shall prepare a Fugitive Dust Control Plan and submit it to the Kern County Planning and Community Development Department prior to construction.			
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4.3-1	d. The following dust control measures shall be implemented: - All on-site unpaved roads shall be effectively stabilized using water or chemical soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board approved soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation. - All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. The excavated soil piles will be watered as needed to limit dust emissions to less than 20% opacity or covered with temporary coverings. - Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when winds exceed 25 miles per hour and those activities cause visible dust plumes. Construction activities may continue if dust suppression measures are used to minimize visible dust plumes. - Track-out debris onto public paved roads shall not extend 50 feet or more from an active operation and track-out shall be removed or isolated such as behind a locked gate at the conclusion of each workday, except on agricultural fields where speeds are limited to 15 mph. - All hauling materials should be moist while being loaded into dump trucks. - All haul trucks hauling soil, sand, and other loose materials on public roads shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). - Soil loads should be kept below 6 inches or the freeboard of the truck. - Drop heights should be minimized when loaders dump soil into trucks. - Gate seals should be tight on dump trucks. - Traffic speeds on unpaved roads shall be limited to 25 miles per hour. - All grading activities shall be suspended when visible dust emissions exceed 20%. - Other fugitive dust control measures as necessary to comply with San Joaquin Valley Air Pollution Control District Rules and Regulations. - Disturbed areas should be minimized. - Disturbed areas should be re-vegetated as soon as possible after disturbance if area is no longer needed for oil and gas activities.		B. The Kern County Planning and Community Development Department will approve the Plan prior to issuing grading or building permits.			
	MM 4.3-3	All off-road construction diesel engines not registered under California Air Resources Board's Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower or more, shall meet, at a minimum, the Tier 3 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless that such engine is not available for a particular item of equipment. In the event a Tier 3 engine is not available for any off-road engine larger than 100 horsepower, that engine shall be equipped with retrofit controls that would provide nitrogen oxides and particulate matter emissions that are equivalent to Tier 3 engine. a. All equipment shall be turned off when not in use. Engine idling of all equipment shall be limited to five minutes, except under exemptions specified in California Code of Regulations Title 13 Section 2449(d)(2)(A). b. All equipment engines shall be maintained in good operating condition and in proper tune per manufacturers' specifications.	Delineated on Site Plan; During construction and operation	KC PCDD		
	MM 4.3-4	To further reduce emissions of oxides of nitrogen from on-road heavy-duty diesel haul vehicles: a. 2007 engines or pre-2007 engines shall comply with California Air Resources Board retrofit requirements set forth in California Code of Regulations Title 13 Section 2025. b. All on-road construction vehicles, except those meeting the 2007/California Air Resources Board-certified Level 3 diesel emissions controls, shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to worker personal vehicles. c. All on-road construction vehicles shall be properly tuned and maintained in accordance with the manufacturers' specifications.	Delineated on Site Plan; During construction and operation	KC PCDD		
	MM 4.3-5	Construction: The Site Plan Application shall include a Site Vicinity Figure showing the location of any sensitive receptor(s) within 3,000 feet of the construction site (potential impact area) for the proposed new well or other ancillary facility or equipment (excluding pipelines). a. If there are no sensitive receptors within this potential impact area, then no construction mitigation measures shall be required. b. If there are sensitive receptors within the potential impact area, then additional information must be provided showing the setback from the closest edge of the well pad to the property line of the nearest sensitive receptor. The minimum distances shall be as follows:	Delineated on Site Plan; During construction and operation	KC PCDD		

Steps to Compliance:
A. The Project Proponent shall take the specified steps to reduce exhaust emissions during construction.
B. The Kern County Building Inspection Department will verify in the field during construction.

Steps to Compliance:
A. The Project Proponent shall take the specified steps to reduce exhaust emissions during construction.
B. The Kern County Building Inspection Department will verify in the field during construction.

Steps to Compliance:
A. Submit a Site Plan Application including a Site Vicinity Figure
B. Submit additional information as applicable
C. Implement risk minimization measures as applicable

4.3-3	Well Depth (Feet)	Minimum Setback Distance from Well Site to Adjacent Property Line of an Existing Sensitive Receptor (Feet)				
	Western Subarea					
	10,000	367				
	5,000	116				
	2,000	NA				
	Central Subarea					
	10,000	367				
	5,000	116				
	2,000	NA				
	Eastern Subarea					
	10,000	296				
	5,000	NA				
	2,000	NA				
	c. If the above setbacks cannot be met, and for existing wells, the Applicant shall provide a site-specific or other risk assessment to the San Joaquin Valley Air Pollution Control District, which may include implementation of one or more of the following risk minimization measures, or other such measures that are demonstrated by the Applicant to the San Joaquin Valley Air Pollution Control District, to achieve a level of risk less than the threshold risk level, and shall provide confirmation from the San Joaquin Valley Air Pollution Control District that the activity that is the subject of the application will not exceed the risk threshold: 1. Placement of engines in the potential impact area away from the sensitive receptors. 2. Utilize directional drilling to locate rig away further from the sensitive receptor(s). 3. Use of late-model engines, low-emission diesel products, alternative cleaner fuels (e.g., natural gas or liquefied petroleum gas), engine retrofit technology, add-on devices such as diesel particulate filters or oxidation catalyst, and/or other options as such become available to reduce emissions from off-road and other equipment. 4. Utilize electricity line power if available. 5. Shutdown all equipment when not in use, and otherwise minimize engine idling by limiting idling to 15 minutes. 6. Use of automatic rigs. 7. Assist and pay to relocate residents to temporary lodging during well construction, drilling, and completion activities, if such residents voluntarily agree to such relocation.					
MM 4.3-6	Applicants shall include in their Worker Environmental Awareness Program information on how to recognize the symptoms of Valley Fever and to promptly report suspected symptoms of work-related Valley Fever to a supervisor. Workers exposed to fugitive dust shall be provided with the option of using a filter fitted over their nose and mouth, secured by a strap, including training for appropriate mask practices as part of the Worker Environmental Awareness Training Program.	Provide with Application Package; During construction and operation	KC PCDD			
Steps to Compliance: A. The Project Proponent shall include the required information into the Worker Environmental Awareness Program and the required options and training. B. The Kern County Planning and Community Development Department will verify in the field during construction and operation.						
4.3-4	MM 4.3-7	Applicant shall submit an Odor Complaint Management Plan to the County prior to receiving its first Site Plan conformity review approval. The Plan shall include a designated contact for odor complaints, creation of a log for odor complaints, and protocol for handling odor complaints. The Odor log and report files shall be available for public review upon request.	Provide with Application Package; During construction and operation	KC PCDD		
	Steps to Compliance: A. Submit an Odor Complaint Management Plan to the Kern County Planning and Community Development Department; B. The Kern County Planning and Community Development Department will approve the Plan prior to issuing the oil and gas conformity review approval.					

	MM 4.3-8 For criteria emissions, not required to be offset under a District rule as described in MM 4.3-1, and for Project vehicle and other mobile source emissions, the County will enter into an emission reduction agreement with the San Joaquin Valley Air Pollution Control District, pursuant to which the Applicant shall pay fees to fully offset Project emissions of oxides of nitrogen, reactive organic gases, and particulate matter of 10 microns or less in diameter (including as applicable mitigating for reactive organic gases by additive reductions of particulate matter of 10 microns or less in diameter) (collectively, “designated criteria emissions”) to avoid any net increase in these pollutants. The air quality mitigation fee shall be paid to the County as part of the Site Plan review and approval process, and shall be used to reduce designated criteria emissions to fully offset Project emissions that are not otherwise required to be fully offset by District permit rules and regulations.	Provide with Application Package; During construction and operation	San Joaquin Valley Air Pollution Control District; KC PCDD		
4.3-6	As an alternative to paying the fee, an Applicant may reduce emissions for one or more designated criteria emissions through actual reductions in air emissions from other Applicant sources, as submitted to the County and validated by the District. This Project offset requirement alternative shall be enforced by the County and verified by San Joaquin Valley Air Pollution Control District, and must be approved in advance by the San Joaquin Valley Air Pollution Control District. If a voluntary emission reduction agreement is not executed by the County and San Joaquin Valley Air Pollution Control District, then each Applicant must mitigate for the full amount of designated criteria pollutants as verified by the San Joaquin Valley Air Pollution Control District, with evidence of such District-verified offsets presented as part of the Site Plan Conformity Review application documentation. Examples of feasible air emission reduction activities that may be funded by air quality fees paid by Applicant or proposed and implemented by the Applicant under the emission reduction agreement include, but are not limited to, the following: a. Replacing or retrofitting diesel-powered stationary equipment such as motors on generators, pumps and wells with electric or other lower-emission engines that are not subject to Title V reductions. b. Replacing or retrofitting diesel-powered school, transit, municipal and other community mobile sources such as buses, car fleets, and maintenance equipment, with electric or other lower-emission engines. c. Reducing emissions from public infrastructure sources such as water and wastewater treatment and conveyance facilities, and reducing water-related emissions through water conservation and reclamation. d. Funding lower-emission equipment and processes for local businesses, schools, non-profit and religious institutions, hospitals, city and county facilities.	Steps to Compliance: A. The Project Proponent shall take the specified steps to reduce emissions according to the emission reduction agreement between the County and the San Joaquin Valley Air Pollution Control District. B. The San Joaquin Valley Air Pollution Control District will verify compliance with the offset requirements			
Biological Resources					
4.4.1	MM 4.4-1 A qualified biologist shall conduct a biological reconnaissance survey in potential special-status species habitat to advise the project proponent of potential project impacts, potential surveying needs, and advise on the need for focused special status surveys. Early consultation with United States Fish and Wildlife Service and California Department of Fish and Wildlife would confirm the biologist’s advice and/or inform project proponents of additional recommendations. Based on the information gathered from the biological reconnaissance survey and any informal consultation with United States Fish and Wildlife Service and California Department of Fish and Wildlife, focused/protocol surveys shall be conducted by a qualified or permitted biologist (whichever is applicable) well in advance of ground disturbing activities to determine the presence/absence of sensitive species protected by state and federal Endangered Species Acts and potential project impacts to those species. The survey shall be conducted in accordance with the most current standard protocol of United States Fish and Wildlife Service and California Department of Fish and Wildlife. The purpose of focused/protocol surveys is to confirm the presence or absence of any species listed as threatened or endangered under the federal Endangered Species Act, threatened or endangered under the California Endangered Species Act, rare or endangered in the California Native Plant Protection Act, or designated as fully-protected in the California Fish and Game Code (collectively, “Protected Species”), and to confirm the presence or absence of any other species considered “sensitive” under California Environmental Quality Act (“Sensitive Species”), and to identify and implement feasible avoidance and minimization measures for such species. The surveys shall be conducted in accordance with all currently-applicable presence and absence survey and/or species protocols established by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife (“Species Protocols”). In the absence of any approved protocols, the survey shall extend for a minimum of 250 feet from all areas where any ground disturbance activities would occur, provided that permission to access has been obtained. As an alternative to individual pre-disturbance surveys for each application, and after consultation with and concurrence by the California Department of Fish and Wildlife and the United States Fish and Wildlife Service, multiple parcels or areas of oil and gas production lands (including lands which may have multiple surface or mineral ownership) may be consolidated for the purpose of more efficiently managing pre-disturbance surveys and determinations regarding the absence of protected species in areas of proposed new ground disturbance activities. A biological monitor shall be present during ground-disturbing activities in project locations that have special-status species habitat or are adjacent to potential special-status species habitat. Within 30 days before any ground disturbing activities in special-status species habitat, a qualified biologist shall conduct a pre-disturbance survey to record existing conditions of the site, determine if conditions have changed since the reconnaissance or focused/protocol surveys were conducted, and to determine where sensitive species avoidance buffers will be established.	Provide with Application Package; During construction and operation	California Department of Fish and Wildlife; U.S. Fish and Wildlife Service; KC PCDD		
		Steps to Compliance: A. A qualified biologist must conduct the surveys. B. A survey plan must be submitted to USFWS and the CDFW for approval prior to surveys. C. Results from the surveys must be submitted to the USFWS, CDFW and Kern County Planning and Community Development Department. D. The survey report must contain avoidance and minimization measures if sensitive species were documented within the survey area.			

MM 4.4-2	No incidental take of any species listed as threatened or endangered under the federal Endangered Species Act, threatened or endangered under the California Endangered Species Act, rare or endangered in the California Native Plant Protection Act, or designated as fully-protected in the California Fish and Game Code (Protected Species) may occur unless the incidental take is authorized by applicable state and federal wildlife agencies in the form of a permit or other written authorization, an approved state or federal conservation plan, or in accordance with an approved regional plan such as the Draft Valley Floor Habitat Conservation Plan and/or Natural Community Conservation Plan.	Provide with Application Package; During construction and operation	U.S. Fish and Wildlife Service; California Department of Fish and Wildlife; KC PCDD		
		Steps to Compliance: A. Obtain permits and/or written authorization from USFWS and CDFW. B. The Kern County Planning and Community Development Department will verify documents and consistence with the Draft Valley Floor Habitat Conservation Plan and/or Natural Community Conservation Plan.			
MM 4.4-3	Protective buffers shall be used, where effective and feasible in the opinion and guidance of the qualified biologist, to avoid any unauthorized incidental take of Protected Species, and to minimize any incidental take of Sensitive Species, by separating the planned disturbance area from any locations where biological reconnaissance surveys, previously conducted focused/protocol surveys, or pre-disturbance surveys have detected the presence of Protected Species or Sensitive Species. Protective buffers shall be delineated using brightly colored stakes and/or flagging or similar materials and remain until construction activities are complete, at which time of completion the buffers must be removed. If special-status plant or animal species are found adjacent to the project during biological surveys, protective buffers shall be established around active dens and/or burrows of special-status animal species, or populations of special-status plant species to avoid unauthorized take of protected species as listed in the table below. The protective buffer distance shall be increased if required to avoid unauthorized incidental take of any Protected Species as determined by a qualified biologist. Protective buffer distances and other avoidance measures that may be implemented to avoid impacts to Protected Species or Sensitive Species must be consistent with the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife, and shall be implemented and overseen by a qualified biologist.	Provide with Application Package;	U.S. Fish and Wildlife Service;		
		During construction and operation	California Department of Fish and Wildlife; KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures related to exclusion barriers or buffers as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
		Table: Disturbance Buffers for Sensitive Resources			
	Sensitive Resource	Buffer Zone from Disturbance (feet)			
	Potential San Joaquin kit fox den	50			
	Known San Joaquin kit fox den	100			
	Natal San Joaquin kit fox den	Contact California Department of Fish & Wildlife, United States Fish & Wildlife Service			
	Atypical San Joaquin kit fox den	50			
	Rodent burrows	50			
	Listed bird species active nests	0.5 mile			
	Burrowing owl burrow (breeding and non-breeding season)	Pursuant to California Department of Fish & Wildlife guidelines (see Table 4.4-85)			
	San Joaquin coachwhip, silvery legless lizard, coast horned lizard	30			
	American badger:				
	Non-maternity dens	50			
	Maternity dens	200			
	Special-status plants	50			
MM 4.4-4	Occupied burrowing owl burrows shall not be disturbed during the species nesting season (February 1 through August 31). The following distances shall be maintained between all disturbance areas and burrowing owl nesting sites (Table 4.4-85).	Provide with Application Package;	U.S. Fish and Wildlife Service; KC PCDD;		
		During construction and operation	California Department of Fish and Wildlife;		

Burrowing owls present in proposed disturbance areas or within 500 feet or as specified under an approved Habitat Conservation Plan (as identified during pre-disturbance surveys) outside of the breeding season (between September 1 and January 31) may be moved away from the disturbance area using passive relocation techniques approved by the California Department of Fish and Wildlife. Passive relocation techniques in the California Department of Fish and Wildlife *Staff Report on Burrowing Owl Mitigation Guidelines* (California Department of Fish and Game 2012) include installing one-way doors in burrow entrances for 48 hours, to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and collapsing existing burrows to prevent reoccupation. A minimum of one or more weeks will be required to relocate the owl(s) and allow for acclimatization to alternate off-site burrows. Prior to burrow exclusion or eviction, a burrowing owl management plan shall be prepared and approved by the California Department of Fish and Wildlife. Destruction of burrows shall occur only pursuant to a management plan for the species approved by the California Department of Fish and Wildlife; burrow excavation shall be conducted by hand whenever possible.

As an alternative to passive relocation, occupied burrows identified off-site within 500 feet of construction activities may be buffered with hay bales, fencing (e.g. sheltering in place), or as directed by the qualified biologist and the California Department of Fish and Wildlife, to avoid disturbance of burrows.

Steps to Compliance:

- The Applicant shall implement measures related to nesting windows and buffer setbacks from nest sites as specified in the mitigation measures.
- The Kern County Planning and Community Development Department will verify.
- If passive relocation techniques are implemented the Applicant must follow the *Staff Report on Burrowing Owl Mitigation Guidelines*.
- If passive relocation or an alternative is implemented a burrowing owl management plan must be prepared and approved by the California Department of Fish and Wildlife.
- The Kern County Planning and Community Development Department will verify.

Table 4.4-85: Setback Distances for Burrowing Owl Nesting Sites by Level of Proposed Project Impacts		
Location		
Nesting sites	Nesting sites	Nesting sites
Time of Year		
April 1–Aug 15	Aug 16–Oct 15	Oct 16–Mar 31
Project Impact Level		
Low		
656 feet (200 meters)	656 feet (200 meters)	164 feet (50 meters)
Medium		
1,640 feet (500 meters)	656 feet (200 meters)	328 feet (100 meters)
High		
1,640 feet (500 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)

MM 4.4-5

The pre-disturbance surveys shall determine whether active bat maternity roosts are located in or within 250 feet of any disturbance area. All active bat maternity roosts shall be avoided during breeding periods, including postponing disturbance activities if required, and to the maximum extent feasible at other times. If an active bat maternity roost location cannot feasibly be avoided by disturbance, the United States Fish and Wildlife Service and California Department of Fish and Wildlife must be contacted to identify appropriate impact minimization measures prior to initiating any disturbance that would affect the roost.

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During construction and operation

U.S. Fish and Wildlife Service;

California Department of Fish and Wildlife;
KC PCDD

Steps to Compliance:

- Conduct pre-disturbance surveys as specified in the mitigation measure.
- If avoidance of bat maternity roosts is not feasible contact the USFWS and CDFW for appropriate minimization measures and approval prior to ground disturbing activities.
- The Kern County Planning and Community Development Department will verify.

MM 4.4-6

Any potential San Joaquin kit fox dens (as defined in United States Fish and Wildlife Service 2011) detected during reconnaissance or focused/protocol surveys shall be reevaluated for species activity no more than 30 days prior to the commencement of ground disturbance. Potential kit fox dens shall be marked and a 50-foot avoidance buffer shall be delineated using brightly colored stakes and flagging or similar materials to prevent inadvertent damage to the potential den. If a potential den cannot feasibly be avoided, the den may be hand excavated in accordance with the United States Fish and Wildlife Service *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (United States Fish and Wildlife Service 2011). If species activity is detected, the location shall be identified as a “known” kit fox den in accordance with the U.S. Fish and Wildlife Service species guidelines (United States Fish and Wildlife Service 2011). A minimum 100-foot buffer from any disturbance area shall be maintained for known dens and a minimum 500-foot buffer from any disturbance area shall be maintained for natal dens. No excavation of a known or natal den shall occur without prior authorization from the United States Fish and Wildlife Service and the California Department of Fish and Wildlife. For activities occurring on land covered under an approved federal and/or State incidental take authorization, the requirements set forth in those documents shall be implemented. Other standard measures to protect San Joaquin kit fox, including capping pipes, covering trenches

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During construction and operation

U.S. Fish and Wildlife Service;

California Department of Fish and Wildlife;
KC PCDD

Steps to Compliance:

- The Applicant shall conduct pre-disturbance surveys as specified in the mitigation measure.
- If den buffers or avoidance is not feasible; the Applicant must consult and obtain approval from the USFWS and CDFW.
- The Applicant shall implement the USFWS *Standardized Recommendation for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* if a den cannot feasibly be avoided.

implemented. Other standard measures to protect San Joaquin kit fox, including capping pipes, covering trenches, adding exit ramps to excavated areas, shall be implemented in accordance with MM 4.4-15.

D. Implement Habitat Conservation Plan measures if activity occurs on covered lands.

E. The Kern County Planning and Community Development Department will verify.

MM 4.4-7

Occupied American badger dens detected during pre-disturbance surveys shall be flagged and ground-disturbing activities avoided within 50 feet of the den. Maternity dens shall be avoided and a minimum 200-foot buffer from disturbance shall be maintained during pup-rearing season (February 15 through July 1). Maternity dens must be avoided to the maximum extent feasible. If a maternity den cannot feasibly be avoided, the California Department of Fish and Wildlife must be contacted to identify appropriate impact minimization measures prior to initiating any disturbance that would affect the den, including potential passive relocation by excavation before or after the rearing season.

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U.S. Fish and Wildlife Service;

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During construction and operation

California Department of Fish and Wildlife;
KC PCDD

Steps to Compliance:

A. The Applicant shall conduct pre-disturbance surveys as specified in the mitigation measure.

B. Implement avoidance measures as specified in the mitigation measure.

C. Consult with CDFW if maternity dens cannot be feasibly avoided.

D. The Kern County Planning and Community Development Department will verify.

MM 4.4-8

Pre-disturbance surveys for all sites located above 2,000 feet in elevation, or within 200 feet down gradient from the 2,000-foot elevation contour line, shall specifically survey for any golden eagle nests located within 2 miles of the site. If golden eagle nests are detected by the surveys, the qualified biologist shall conduct a nest-specific viewshed analysis. No disturbance may occur within 0.25 mile, or within 0.5 mile of the viewshed of an active golden eagle nest unless otherwise authorized by State and federal wildlife agencies. The United States Fish and Wildlife Service and California Department of Fish and Wildlife must be notified prior to the commencement of any disturbance activities within 1 mile of an active golden eagle nest to avoid golden eagle take.

Provide with Application Package;
During construction and operation

U.S. Fish and Wildlife Service;
California Department of Fish and Wildlife;
KC PCDD

Steps to Compliance:

A. The Applicant shall conduct pre-disturbance surveys as specified in the mitigation measure.

B. Implement avoidance measures as specified in the mitigation measure.

C. Consult with USFWS and CDFW if nest buffers cannot be feasibly avoided.

D. The Applicant must provide documentation in writing that consultation with USFWS and CDFW was conducted for project activities within a nest buffer.

E. The Kern County Planning and Community Development Department will verify.

MM 4.4-9

All sites located above 2,000 feet in elevation, or within 200 feet down gradient from the 2,000-foot elevation contour line, shall implement the following measures to avoid and minimize potential adverse impacts to the California condor:

a. The site shall, at all times, be maintained to avoid any trash, debris, food sources and microtrash, such as bottle caps, that could be ingested by or attract California condor. Trash shall be disposed in animal-proof containers as required in BIO 4.4-19.

b. The Worker Environmental Awareness Program described in BIO MM 4.4-18 shall include information about microtrash and potential effects to California condor, and shall prohibit the disposal of trash (and microtrash) on the site of oil and gas activities.

c. If a condor is observed in a proposed construction site, all disturbance activities must immediately cease within 500 feet of the condor until the animal has moved from the site. If condor occurrence persists, the United States Fish and Wildlife Service and the California Department of Fish and Wildlife must be contacted to identify appropriate avoidance measures prior to initiating or resuming any disturbance activity.

d. All condor observations shall be reported within 24 hours to the United States Fish and Wildlife Service and the California Department of Fish and Wildlife.

e. All tanks, liquid storage facilities, and any open area containing water or other liquid materials, including drilling sumps, must be covered or otherwise shielded in a manner that prevents condor intrusion and potential entrapment.

f. No overhead transmission lines may be used at the site without the prior approval of the United States Fish and Wildlife Service and the California Department of Fish and Wildlife.

Provide with Application Package;

U.S. Fish and Wildlife Service; KC PCDD;

During construction and operation

California Department of Fish and Wildlife;

Steps to Compliance:

A. A qualified biologist shall monitor all construction activities for impacts to the California condor.

B. The Applicant shall train workers on the issue of trash, debris, food sources and microtrash – what it is, and its potential effects to the California condors.

C. The Applicant shall implement the Workers Environmental Awareness Program prior to the start of construction.

D. The Applicant shall report all California condor sightings during construction to the USFWS and CDFW, and Kern County Planning and Community Development Department.

E. The Applicant shall provide written documentation the Kern County Planning and Community Development Department showing implementation of additional measures specified in the mitigation measures.

MM 4.4-10

Pre-disturbance surveys for active bird nests must be conducted no more than 10 days prior to the commencement of disturbance. Surveys shall follow United States Fish and Wildlife and California Department of Fish and Wildlife guidance and/or protocols, as applicable. If no active nests or nesting birds are identified, then Project construction activities may proceed and no further mitigation measures for nesting birds are required. If active nest(s) are identified, the active nest(s) should be continuously surveyed for the first 24 hours after detection, to establish a behavioral baseline prior to any construction-related activities. Once construction commences, all nests shall be continuously monitored to detect any behavioral changes as a result of the Project (i.e., nest avoidance or abandonment). If behavioral changes are

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observed, the work causing that change should cease and the California Department of Fish and Wildlife and the United States Fish and Wildlife should be consulted for additional avoidance and minimization measures. If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, a minimum no-disturbance buffer of 250 feet will be established around active nests and a 500-foot no-disturbance buffer around the nests of raptors until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, and any adult birds are no longer occupying the nest. Variance from these no-disturbance buffers may be implemented a qualified biologist concludes that work within the buffer area would not cause nest avoidance or abandonment (e.g., when the disturbance area would be concealed from a nest site by topography). The California Department of Fish and Wildlife and the United States Fish and Wildlife must be notified in advance of implementing of a variance in the no-disturbance buffer.

Steps to Compliance:

- A. The Applicant shall conduct pre-disturbance surveys as specified in the mitigation measure.
- B. Implement avoidance measures as specified in the mitigation measure
- C. A qualified biologist shall monitor all construction activities for impacts to active bird nests if nest buffers cannot be implemented.
- D. The Applicant shall provide written documentation and approval of variance from the no-disturbance areas to Kern County Planning and Community Development Department.
- E. The Kern County Planning and Community Development Department will verify prior to issuing NTP or permits.

MM 4.4-11

The following measures will be implemented to avoid take of blunt-nosed leopard lizard and to ensure protection of these animals during Project activities:

- a. Project activities will avoid all potential burrows that may be occupied by blunt-nosed leopard lizards. Suitable burrows within and adjacent to potential habitat for the species should be avoided by a minimum distance of 50-feet in all areas where ground-disturbing Project activities will occur.
- b. No more than one year prior to ground disturbing activities, focused surveys following current California Department of Fish and Wildlife and United States Fish and Wildlife protocols for detection of this species or other methods approved by both agencies shall be conducted in all potential blunt-nosed leopard lizard habitat within the work site and a 250-foot buffer area. If no individual blunt-nosed leopard lizards are observed during focused surveys, and surveys are current (e.g., completed in the same calendar year), then Project activities may proceed.
- c. If blunt-nosed leopard lizards are detected during focused surveys, a blunt-nosed leopard lizard avoidance plan shall be prepared for the Project that will result in avoidance of incidental take of this species unless take is separately authorized under a Natural Communities Conservation Plan and appropriate federal authorization is obtained. At a minimum, the blunt-nosed leopard lizard avoidance plan shall be provided to the California Department of Fish and Wildlife and the County, and shall contain the following elements:

1. A Worker Environmental Awareness Program shall be implemented for all construction personnel before construction begins (see MM 4.4-18).
2. During periods that are optimal for blunt-nosed leopard lizard activity (early spring through late fall), a qualified biologist will be present during all ground disturbing activities. The qualified biologist will check the Project site(s) and access route(s) daily during the blunt-nosed leopard lizard active season to determine presence or absence of lizards in or near the work areas. Monitoring by a qualified biologist is not required during periods of inactivity (the winter season).
3. All open trenches or excavations shall be covered at the end of each workday or protected with the use of exclusion fencing to prevent wildlife entrapment. If an excavation is too large to cover, escape ramps shall be installed at an incline ratio of no greater than 2:1. All trenches and pipes shall be inspected for the presence of wildlife each day prior to the commencement of work. If blunt-nosed leopard lizards are observed at the work site during construction, construction shall cease within a 250-foot radius and the United States Fish and Wildlife Service and the California Department of Fish and Wildlife shall be consulted to determine what additional measures would be necessary to prevent take of this species.
4. Offsite locations where blunt-nosed leopard lizards have been observed or are likely to occur shall be clearly marked to prevent workers from driving off the road and to prevent inadvertent destruction of burrows. Barriers, such as exclusionary fencing may be installed. All construction equipment and construction personnel vehicles will be checked prior to moving to ensure no blunt-nosed leopard lizard are under equipment/vehicles.
5. A speed limit of 10 miles per hour shall be posted and observed within 0.25 miles of any reported blunt-nosed leopard lizard observation.
6. Construction activities shall avoid burrows that may be used by blunt-nosed leopard lizards. Any location of proposed construction activity with potential to collapse or block burrows (i.e., stockpile storage, parking areas, staging areas, trenches) will be identified prior to construction in the blunt-nosed leopard lizard avoidance plan and approved by the qualified biologist. The qualified biologist may allow certain activities in burrow areas if the combination of soil hardness and activity impact is not expected to collapse burrows and no blunt-nosed leopard lizards have been found during pre-Project surveys in the impact area.
7. All individual blunt-nosed leopard lizards observed above-ground will be avoided. Any individual blunt-nosed leopard lizard that may enter the Project site(s) would be allowed to leave unobstructed, and on its own accord. If a blunt-nosed leopard lizard is detected during biological monitoring or observed at any other point, the California Department of Fish and Wildlife and the United States Fish and Wildlife Service shall be notified to determine what additional measures would be necessary to prevent take of the species.

Provide with Application Package;

U.S. Fish and Wildlife Service;

During construction and operation

California Department of Fish and Wildlife; KC PCDD

Steps to Compliance:

- A. The Applicant shall conduct focused surveys as specified in the mitigation measure.
- B. Implement avoidance measures as specified in the mitigation measure
- C. A qualified biologist shall monitor all construction activities except during periods of inactivity (the winter season).
- D. The Applicant shall provide avoidance plan if blunt-nosed leopard lizards were detected during focused surveys.
- E. Implement the Worker Environmental Awareness Program.
- F. Implement additional measures as described in the mitigation measure.
- G. The Kern County Planning and Community Development Department will verify prior to issuing NTP or permits.

MM 4.4-12 The Applicant shall comply with the following:

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During construction and operation

U.S. Fish and Wildlife Service;
California Department of Fish and Wildlife;

	a. Plant surveys for Protected Species and Sensitive Species must be completed by a qualified biologist during the appropriate blooming periods for species identification and detection. Plant surveys shall be conducted in accordance with all applicable protocols established by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife for particular plant species ("Plant Survey Protocol"), and shall extend 50 feet from areas where any new disturbance would occur unless a greater survey distance is specified in the Plant Survey Protocol. All detected plant populations of Protected Species and Sensitive Species shall be identified in the field during the surveys with temporary flags or other appropriate materials to avoid and minimize impacts to the plant populations from any disturbance activities. b. No incidental take or relocation of any plant listed under the federal Endangered Species Act, the California Endangered Species Act, or the California Native Plant Protection Act may occur unless the incidental take is authorized by the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife in a permit or other authorization, or in an approved Habitat Conservation Plan or Natural Communities Conservation Plan. If focused plan surveys detect the presence of any listed plant, the plant populations shall be buffered from disturbance activities by implementing applicable impact avoidance protocols established by the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife unless incidental take authority is obtained. Projects covered under incidental take authority shall conduct activities in accordance with the take authorization. The California Department of Fish and Wildlife may be contacted to determine the appropriate buffer required to prevent incidental take of a listed plant if avoidance protocols have not been established for the species. The qualified biologist shall confirm that all applicable listed plant buffers have been implemented prior to the commencement of any disturbance activity. c. If any non-listed sensitive plant species are identified that may be impacted by new ground disturbing activities, populations must be avoided by a 50-foot buffer.		KC PCDD		
		Steps to Compliance: A. The Applicant shall conduct botanical surveys as specified in the mitigation measure. B. Implement avoidance measures as specified in the mitigation measure. C. The Kern County Planning and Community Development Department will verify prior to issuing NTP or permits.			
MM 4.4-14	A Worker Environmental Awareness Program shall be developed and implemented for all personnel that could access the site prior to commencing any disturbance activities. The program shall consist of an on-site or center presentation that will describe the locations and types of sensitive plant, wildlife, and sensitive natural communities (collectively, "Biological Resources") on and near the site, an overview of the laws and regulations governing the protection of Biological Resources, the reasons for protecting the Biological Resources, the specific protection and avoidance measures that are applicable to the site, and the identity of designated points of contact should questions or issues arise, including the qualified biologist. The program shall provide training to recognize, avoid and report to applicable qualified biologists any Biological Resources on the site. a. The Worker Environmental Awareness Program shall emphasize the need to avoid contact with onsite wildlife, and avoid entry into areas where Biological Resources have been identified based on pre-disturbance field surveys and to implement the buffer avoidance or other protection measures established by the United States Fish and Wildlife Service shall be identified California Department of Fish and Wildlife or required by the Biological Resource mitigation measures. The training shall emphasize the importance of not feeding or domesticating wildlife and the need to avoid any trash, microtrash, or potential food disposal onsite except in animal-proof containers emptied daily to avoid attracting, or causing adverse impacts to special status wildlife. b. All onsite personnel must sign a statement verifying that they have completed the Worker Environmental Awareness Program, and that they understand and agree to implement the biological requirements for the worksite. If signed employee statements are not available, documentation may be provided by Worker Environmental Awareness Program training records, which shall be kept by the Applicant for a minimum of 5 years. Each Applicant shall maintain a list of all persons who have completed the training program, and shall provide the list to the County or to state and federal wildlife agency representatives upon request.	Provide with Application Package; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures related to Worker Environmental Awareness Program as specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.			
MM 4.4-15	The following additional measures shall be implemented to avoid and minimize potential significant adverse impacts to Protected and Sensitive Species: a. All vehicles shall observe a 20-mile-per-hour speed limit in all areas of disturbance and on unpaved roads unless otherwise posted. Off-road traffic outside of designated access routes is prohibited. Speed limit signs shall be posted in visible locations at the point of site entry and at regular intervals on all unpaved access roads. b. All disturbance activities, except emergency situations or drilling that may require continuous operations, shall only occur during daylight hours. Night time disturbance activity for drilling purposes shall use directed lighting, shielding methods, or reduced lumen intensity to avoid unnecessary visual disturbance to wildlife and to comply with applicable lighting mitigation measures. c. All food-related trash items and all forms of microtrash, such as wrappers, cans, bottles, bottle tops, and food scraps shall be disposed of in closed, animal proof containers and removed daily from the site. d. Excavations, spoils piles, access roadways, and parking and staging areas shall subject to dust control as set forth in the dust control mitigation measures. e. The use of herbicides for vegetation control shall be restricted to those approved by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife. No rodenticides shall be used on any site unless approved by the United States Fish and Wildlife Service, and the California Department of Fish and Wildlife, and shall observe label and other restrictions mandated by the United States Environmental Protection Agency, California Department of Food and Agriculture, and state and federal laws and regulations. For split estates, no herbicides for vegetation control may occur in Tier 2 areas without surface owner approval. f. No plants or wildlife shall be collected, taken, or removed from the site or any adjacent locations except as necessary for Project-related vegetation removal or wildlife relocation by a qualified biologist and subject to all applicable permits and authorizations.	Provide with Application Package; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures related to protected and sensitive species as specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.			

- g. All open trenches or excavations shall be covered at the end of each workday to prevent wildlife entrapment. If an excavation is too large to cover, escape ramps shall be installed at an incline ratio of no greater than 2:1. All trenches and pipes shall be inspected for the presence of wildlife each day prior to the commencement of work.
- h. To enable San Joaquin kit foxes and other wildlife to pass through the Project site, any perimeter fencing shall include a 4- to 8-inch opening between the fence mesh and the ground or the fence shall be raised 4 inches above the ground except blunt-nosed leopard lizard exclusion fencing. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife.
- i. All vertical tubes used in Project construction and chain link fencing poles, shall be temporarily or permanently capped to avoid the entrapment and death of special-status wildlife and birds. All pipes 1.5 inches or greater in diameter stored overnight on a project location must have end caps or other physical barriers that prevent wildlife from entering the pipe.
- j. All dead or injured special status wildlife shall be left in place and reported to the United States Fish and Wildlife Service and the California Department of Fish and Wildlife within 48 hours of discovery for rescue or salvage. Discovery of state or federal listed species that are injured or dead shall also be managed consistent with regulatory requirements, including being reported immediately via telephone and within 24 hours in writing, and with a copy to Kern County Planning and Community Development.
- k. All drilling installations and operations will comply at all times with the applicable federal, State, county, and local law ordinances and regulations.
- l. All activity shall use previously disturbed areas to the maximum extent feasible to minimize the amount of new disturbance.
- m. All concrete and asphalt debris should be removed from the site for recycling or proper disposal.
- n. No vehicles or construction equipment shall be parked within a wetland or waterbody/dry wash.
- o. Tracked vehicles and other construction equipment must be washed or maintained to be weed-free prior to entering and working within areas of new disturbance.
- p. All washing of trucks, paint, equipment, or similar activities should occur in areas where runoff is fully contained for collection and offsite disposal. Wash water may not be discharged from the site and shall be located at least 100 feet from any water body, or sensitive Biological Resources.
- q. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries or waterbody, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.
- r. All areas that must be avoided as result of the pre-disturbance surveys, and areas where new disturbance will occur, shall be clearly delineated by fencing or staking and flagging and/or rope or cord.
- s. No firearms shall be allowed on any site.
- t. No pets shall be allowed on any site.
- u. No smoking may occur except in designated areas.
- v. If ground disturbance is intended to be temporary and does not occur on cultivated and crop lands, perform topsoil segregation during construction activities to preserve the seed bank for restoration efforts. Store the segregated topsoil separate from the subsoil and restore segregated topsoil to its original location.

MM 4.4-16	Ground disturbance shall be mitigated at a 1.0 to 1.0 ratio (one-acre of new disturbance shall require one-acre of mitigation) except in Tier 1 areas that contain existing disturbance of 70% or greater which shall be mitigated at a 1.0 to 0.5 ratio (one-acre of new disturbance shall require one-half acre of mitigation), for the land included in the Site Plan. This compensatory mitigation requirement does not apply to construction on ground for which compensatory mitigation has already been provided, or on ground that has been previously disturbed (e.g., cleared of vegetation for other oil and gas extraction uses, existing unpaved roads, and existing unvegetated well pads). Ground disturbance activities that are authorized by permits or other written authorizations approved by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife, which include avoidance and compensatory mitigation acreage requirements, may be used to satisfy this County compensatory mitigation ratio. Compensatory mitigation shall be required for the actual acreage of ground disturbance documented during the site plan review and completion process. New disturbance mitigation may be satisfied by one or a combination of the following measures: a. The recordation of a conservation easement or similar permanent, long-term conservation management agreement in a form acceptable to the County for land within the Project Area on land that has mitigation value. The easement lands may be owned by an Applicant or a third party under contract with an Applicant. Larger land areas may be placed under a conservation easement or similar agreement, and an Applicant may “draw down” the conserved land as needed to satisfy the acreage mitigation requirements for multiple site plan review conformity permits or other authorizations from the County for oil and gas activities. b. Acquisition of land preservation credits from a mitigation bank located within the Project Area which is owned by the County, on other lands approved by the County, or on lands approved for mitigation or conservation purposes by the United States Fish and Wildlife Service or the California Department of Fish and Wildlife. c. Removal of legacy oil and gas equipment, inclusive of compliance with applicable legal requirements (e.g., well plugging and abandonment requirements under state or federal regulations), restoration of the surface grade to be consistent with surrounding lands, complete a reseeded effort using native species, and notification of the site owner (if not the Applicant) of the completion of the removal and grading restoration work. d. Enhancement or restoration of existing habitat on lands already subject to a conservation easement or similar agreement, or which become subject to a conservation easement or similar agreement subsequent to the certification of this Environmental Impact Report, provided that such activities are covered in a permit or authorization, conservation plan, Habitat Conservation Plan, or Natural Community Conservation Plan, approved by the United States Fish and Wildlife Service or the California Department of Fish and Wildlife. e. Payment of a biological resources mitigation fee for the acquisition and management of mitigation lands, legacy equipment removal, and/or land enhancement already subject to conservation easements or a similar agreements under the terms of any biological resource mitigation program that is adopted by Kern County and approved by the United States Fish and Wildlife Service or the California Department of Fish and Wildlife. The County shall coordinate with the United States Fish and Wildlife Service or the California Department of Fish and Wildlife to identify priority conservation areas and potential conservation partners and funding sources to increase the efficiency and effectiveness of mitigation fee expenditures.	Provide with Application Package; During construction and operation	U.S. Fish and Wildlife Service; California Department of Fish and Wildlife; KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures related to mitigation ratios as specified in the mitigation measure. B. The Applicant shall implement the additional measures specified in the mitigation measure. C. The Kern County Planning and Community Development Department will verify.			

4.4.2	MM 4.4-17	Pre-disturbance surveys shall be conducted by a qualified biologist during the appropriate periods for detecting Sensitive Natural Communities that could occur within the Project Area. The surveys shall be completed consistent with applicable protocols approved by the United States Fish and Wildlife Service and/or the California Department of Fish and Game, including the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (California Department of Fish and Wildlife 2009). The qualified person shall map and identify all sensitive natural communities, including riparian communities that occur in or within 100 feet of any new disturbance area. The site plan for the proposed activity shall identify waters, wetlands, resources subject to section 1600 of the CFGC, and other riparian habitats that occur in and within 100 feet of the disturbance area.	Provide with Application Package; During construction and operation	U.S. Fish and Wildlife Service; KC PCDD; California Department of Fish and Wildlife;		
	Steps to Compliance: A. The Applicant shall conduct pre-disturbance surveys as specified in the mitigation measure. B. The Applicant shall submit a site plan identifying all waters, wetlands and other riparian habitats as specified in the mitigation measure. C. The Kern County Planning and Community Development Department will verify.					
	MM 4.4-18	No land disturbance activity in any Sensitive Natural Community that requires a state or federal permit, including state or federally regulated wetlands and waters, shall occur unless the activity is specifically authorized by the issuance of permits or approvals as required by state and federal law. This provision is not intended to restrict survey activities or restrict permit approvals for such disturbance activities. However, no new wells, tanks, sumps or ponds shall be constructed within 50 feet of federal or state waters or wetlands.	Provide with Application Package; During construction and operation	U.S. Fish and Wildlife Service; California Department of Fish and Wildlife; KC PCDD		
Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.						
4.4-5	MM 4.4-19	In the event that new disturbance would occur at a site within an oak woodland area as defined in Section 1.10.10 of the Kern County General Plan Land Use, Open Space and Conservation Element (10% or greater oak tree cover), the Applicant shall comply with the minimum 30% canopy retention standard in Section 1.10.10 KK (a). Impacts to oak trees in other locations, and in locations that meet the criteria for an oak woodland area, shall be avoided to the maximum extent practicable, including modification of the disturbance area, if feasible, to avoid existing oak trees within a site.	Provide with Application Package; During construction and operation	KC PCDD		
Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.						
4.4-6	MM 4.4-20	Applicants shall fund through the Site Conformity Review administrative fee, preparation by Kern County of, an annual report describing the Project’s ground disturbance acreage, and the acreage of compensatory mitigation lands, in each sub-area. For Covered Activities within areas included in proposed HCPs, the requirements of MM 4.4-1 – 4.4-19 may be superseded by specific requirements imposed by USFWS as part of approval of a federal incidental take permit (e.g., under Section 10 or Section 7 of the Endangered Species Act), or by CDFW as part of approval of a state incidental take permit (e.g., under the Fish and Game Code), provided that USFWS (in the case of a federal incidental take permit) or CDFW (in the case of a state incidental take permit) concludes in writing that such requirements provide equivalent or greater protection than MM 4.4-1 – 4.4-19 (or any subset thereof).	Provide with Application Package; During construction and operation	KC PCDD		
Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.						
Cultural Resources						
4.5-1	MM 4.5-1	Prior to initiating ground disturbance activities for an activity for which a conformity review is required, the Applicant shall:	Provide with Application Package; During construction and operation	KC PCDD; State Historic Preservation Office		
	a. Provide an archival records search completed by a qualified archaeologist. This shall include an examination of the California Historical Resources Information Files at the Southern San Joaquin Valley Information Center, California State University, Bakersfield, and a search of the Native American Heritage Commission Sacred Lands Files, Sacramento. The Applicant may rely on a previously performed records search for subsequent ground disturbing activities. b. If an application location has been previously surveyed and no cultural resources have been recorded on it, no further cultural resources studies shall be required. c. Implement either: 1. If a site plan includes land that has experienced 100% previous ground-surface disturbance, or is within a section with 300 or more existing oil wells or other agricultural, industrial or urban uses, and the records searches indicate that no cultural or Native American resources are known on it, no further cultural resources studies shall be required. All other application locations shall be subject to intensive (100%) pedestrian ground-surface survey (Phase I survey/Class III inventory) by qualified archaeologists. The Applicant may rely on a previously performed ground surface survey for subsequent ground disturbing activities; or 2. If an application location has not been previously surveyed based on the records search information, an intensive (100%) pedestrian ground-surface survey (Phase I survey/Class III inventory) by qualified archaeologists shall be required. d. All prehistoric/Native American archaeological sites, whether identified during the records searches or during the intensive survey, shall be demarcated by a qualified archaeologist, fenced by the Applicant, and preserved in place.					
Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.						

	e. Historical (Euro-American) archaeological sites that are potentially eligible for listing in the National Register of Historic Places shall be evaluated by a qualified archaeologist and must meet the requirements of the National Historic Preservation Act of 1966 in order to qualify. Qualifying sites, structures and equipment that are identified during the records search or field survey shall be fenced and preserved in open-space, removed and curated, or treated using appropriate data recovery procedures. f. Historical (Euro-American) archaeological site types relating to oil and gas activities that have been determined Not Significant/Unique shall require no archaeological study or treatment. g. All oil and gas industry employees conducting work in the area identified on the Conformity Site Plan shall complete Worker Environmental Awareness Program training including training dedicated to cultural resources protection.				
4.5-3	MM 4.5-2 As part of any Worker Environmental Awareness Program training, <u>all</u> construction personnel shall be trained regarding the recognition of possible buried paleontological resources and protection of paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. Training shall inform construction personnel of the procedures to be followed upon the discovery of paleontological materials. All personnel shall be instructed that unauthorized collection or disturbance of fossils is unlawful.	Provide with Application Package;	KC PCDD		
	Steps to Compliance: A. The Applicant shall implement the Worker Environmental Awareness Program measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.				
	MM 4.5-3 All permits for new wells that use Enhanced Oil Recovery or Well Stimulation methods shall pay a mitigation fee of \$50 per well shall be paid to the Buena Vista Museum to fund the continued education and curation of paleontological resources and provide educational support regarding the paleontological history of the region.	Provide with Application Package; During construction and operation	KC PCDD; Buena Vista Museum		
	Steps to Compliance: A. The Applicant shall pay a mitigation fee as specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.				
4.5-4	MM 4.5-4 In the event archaeological materials are encountered during the course of ground disturbance or construction, the Project operator/contractor shall cease any ground disturbing activities within 50 feet of the find. The qualified archaeologist shall evaluate the significance of the resources and recommend appropriate treatment measures. Per California Environmental Quality Act Guidelines Section 15126.4(b)(3), Project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with California Environmental Quality Act Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The Planning and Community Development Department shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. If after consultation it is deemed appropriate, archaeological materials recovered during any investigation shall be curated at an accredited curation facility. The qualified archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Community Development Department and to the Southern San Joaquin Valley Information Center. In the event archaeological materials are encountered, in Tier 2 the surface owner shall be notified immediately.	During construction	KC PCDD		
		Steps to Compliance: A. The Applicant shall submit an unanticipated discovery plan as part of the oil and gas conformity review. B. A qualified archaeologist shall evaluate any unanticipated site for significance and recommend appropriate treatment measures. C. The Applicant qualified archaeologist shall outline the recommendations for data recovery and curation in a report for submittal to the Kern County Planning and Community D. The Kern County Planning and Community Development Department shall deem if or when ground disturbing activities within 50 feet of the find can or cannot resume.			
	MM 4.5-5 If human remains are uncovered during Project construction, the Applicant shall immediately halt all work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. The Kern County Planning and Community Development Department shall be notified concurrently. If the County Coroner determines that the remains are Native American, the Project proponent shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the applicant, in coordination with the landowner, shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the discussion and conference with the Most Likely Descendant has occurred, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply. In the event human remains are uncovered, in Tier 2 the surface owner shall be notified immediately.	During construction	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify.			
Geology and Soils					

4.6-1	MM 4.6-1 Prior to beginning a ground disturbance activity, the Applicant shall comply with the following regulations (as applicable) and confirm compliance in its Site Plan Conformity Review application documentation: a. Alquist-Priolo Earthquake Fault Zoning Act. b. California Building Code. c. Division of Oil Gas and Geothermal Resources regulations, as identified in the California Code of Regulations, Title 14, Division 2, Chapter 4, including regulations implementing Senate Bill 4 as applicable. If hydraulic fracturing is conducted for any well associated with the Site Plan Conformity Review, the Applicant shall comply with requirements to monitor the California Integrated Seismic Network for indication of an earthquake of magnitude 2.7 or greater for the period of 10 days following the end of hydraulic fracturing. The earthquake search radius shall be consistent with Division of Oil Gas and Geothermal Resources Senate Bill 4 regulations. The data will be submitted to Division of Oil Gas and Geothermal Resources for an evaluation of the risks and actions consistent with the Division of Oil Gas and Geothermal Resources Senate Bill 4 regulations. In approving a well stimulation treatment permit that would authorize, within an urban area (i.e., an area with a population over 50,000, as defined by the U.S. Census Bureau), the emplacement of well stimulation fluids into an oil or gas formation that has not been previously been subject to well stimulation activity, and/or into an oil or gas formation for which Division of Oil Gas and Geothermal Resources does not yet possess adequate information about formation fracture geometries, Division of Oil Gas and Geothermal Resources shall impose a permit condition requiring that the applicant conduct ground monitoring to characterize as-built fracture geometries prior to, during, and post-hydraulic fracturing. Monitoring shall also be conducted during fracturing treatments by use of applicable microseismic fracture mapping, tilt measurements, tracers, or proppant tagging. Copies of ground monitoring records shall be provided to the County and Division of Oil Gas and Geothermal Resources for review and approval within 30 days of well stimulation treatment. d. Additionally, the Applicant shall: 1. Avoid placement of structures intended for human occupancy on or within 50 feet of any active faults designated and mapped pursuant to the Alquist-Priolo Earthquake Fault Zoning Act where the fault breaks the surface. 2. Have a professional geologist prepare a fault rupture hazard evaluation according to guidelines in California Geological Survey Special Publication 42, 2007 for new developments with structures that are intended for human occupancy. 3. All Class II injection wells shall be authorized, and shall comply with all applicable legal requirements, Underground Injection Control Program Approval permit conditions, and be operated according to the California Code of Regulations Title 14 requirements, as described in the mitigation measures for Hydrology and Water Quality. 4. Ensure that active fault trace placement restrictions are in place for all permanent tanks and storage reservoirs used to store, treat, or transport hazardous materials or materials that are considered pollutants to surface water and groundwater, located in an Earthquake Fault Zone. Ensure that all newly installed pipelines subject to 49 Code of Federal Regulations (CFR) Parts 192 and 195, are engineered and constructed in compliance with the requirements of the pipeline safety regulations, as set forth by the Pipeline Hazardous Materials Safety Administration (PHMSA). All other newly installed pipelines that transport gas or hazardous liquids are to be constructed, tested operated and maintained in accordance with good oilfield practice and applicable standards set forth and approved by the State Oil and Gas Supervisor. Ensure that all new pipelines designated for or water used for fire suppression are engineered and constructed in compliance with the requirements of California Building Code Chapter 9, Fire Protection Systems, and the California Fire Code to address potential fault rupture displacements.	Prior to ground disturbance activity	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Building Department will verify during the oil and gas conformity review process.			
4.6-1	MM 4.6-2 All structures designed for human occupancy shall be designed to withstand substantial ground shaking in accordance with applicable California Building Code seismic design standards and Kern County Building Code.	During construction and operation	Kern County Public Works Department		
		Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Building Department will verify during the oil and gas conformity review process.			
4.6-4	MM 4.6-3 Operators shall avoid siting wells or accessory equipment and facilities on slopes greater than 30% unless the Applicant determines that mineral recovery is infeasible from a different location, and site-specific Professional Engineering certification is submitted concluding that the new equipment will not cause landslides.	Provide with Application Package; During construction and operation	Kern County Public Works Department		
		Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Building Department will verify during the oil and gas conformity review process.			
4.6-6	MM 4.6-4 The Applicant shall confirm compliance with, and shall implement, a Division of Oil Gas and Geothermal Resources approved re-pressuring plan as required by Division 3, Chapter 1, Article 5.5 of the Public Resources Code, commencing with Section 3315. In developed areas where subsidence is confirmed or suspected, subsidence monitoring shall be required using Synthetic Aperture Radar studies and/or other methods as approved by the Division of Oil Gas and Geothermal Resources to quantify and evaluate the potential effect on the area.	Provide with Application Package; During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources		
		Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.			

4.6-7	MM 4.6-5 The Applicant shall avoid building infrastructure on expansive soils unless the Applicant determines that mineral recovery is infeasible from a different location, and site-specific Professional Engineering certification is submitted concluding that the new equipment will not cause substantial risks to life or property.	Prior to issuing the NTP or permits Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.	KC PCDD		
Green House Gas Emissions					
4.7-1	MM 4.7-1 An Applicant covered by the Cap-and-Trade Program with permitted stationary sources shall comply with the Cap-and-Trade regulation (especially by surrendering greenhouse gas allowances or offset credits to satisfy their compliance obligation under the Program), and implement Best Performance Standards applicable to greenhouse gas reduction for Components at Light Crude Oil and Natural Gas Production, Natural Gas Processing Facilities, Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants (San Joaquin Valley Air Pollution Control District 2010), Thermally Enhanced Oil Recovery Wells (San Joaquin Valley Air Pollution Control District 2010a), Steam Generators (San Joaquin Valley Air Pollution Control District 2010b), and Front-line Organic Liquid Storage Tanks (San Joaquin Valley Air Pollution Control District 2011).	Provide with Application Package; During construction and operation Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.	KC PCDD; San Joaquin Valley Air Pollution Control District		
	MM 4.7-2 Each Applicant covered by the Cap-and-trade Program shall comply with applicable Cap and Trade regulations, and other applicable greenhouse gas emission control and reduction regulations as these may be adopted or amended over time, to reduce, avoid, mitigate and/or sequester greenhouse gas emissions from Project-related air emissions.	Provide with Application Package; During construction and operation Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.	KC PCDD; San Joaquin Valley Air Pollution Control District		
	MM 4.7-3 Each Applicant shall implement methods to recover for reuse or destroy methane existing in associated gas and casinghead gas, as follows: a. Recover all associated gas produced from the reservoir via new wells, regardless of the well type, except for gas produced from wildcat and delineation wells or as a result of start-up, shutdown and maintenance activities (whether planned or unplanned), system failures, and emergencies in accordance with San Joaquin Valley Air Pollution Control District regulations (Rule 4401 and 4409), as this may be amended over time. b. Compliance with the expected California Air Resources Board methane regulation.	Provide with Application Package; During construction and operation Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.	KC PCDD; San Joaquin Valley Air Pollution Control District		
	MM 4.7-4 Each Applicant shall offset all greenhouse gas emissions not covered by the Cap-and-Trade program or other mandatory greenhouse gas emission reduction measures through Applicant reductions of greenhouse gas emissions as verified by Kern County, through acquisition of offset credits from the California Air Pollution Control Officers Association Exchange Register or other third party greenhouse gas reductions, with consultation to the validity of methodology for calculating reductions verified by the San Joaquin Valley Air Pollution Control District and accepted by Kern County, or through inclusion in an Emission Reduction Agreement, to offset Project-related greenhouse gas emissions that are not included in the Cap and Trade program to assure that no net increase in greenhouse gas emissions from the Project.	Provide with Application Package; During construction and operation Steps to Compliance: A. The Applicant shall implement the measures specified in the mitigation measure. B. The Kern County Planning and Community Development Department will verify during the oil and gas conformity review process.	KC PCDD; San Joaquin Valley Air Pollution Control District		
Hazards and Hazardous Materials					
4.8-1	MM 4.8-1 The Applicant shall provide a comprehensive Worker Environmental Awareness Program to the County with its first Site Plan Conformity Review permit application in each calendar year. The program shall include all training requirements identified in Applicant Best Management Practices and mitigation measures, and include training for all field personnel (including Applicant employees, agents and contractors). The Worker Environmental Awareness Program shall include protocols and training for responding to and handling of hazardous materials and hazardous waste management, and emergency preparedness, release reporting, and response requirements. In Tier 2, the Worker Environmental Awareness Program shall be provided to the surface owner at the time of the application pathway process so the surface owner may educate employees as well.	Provide with Application Package; During construction and operation Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.	KC PCDD		
	MM 4.8-2 The Applicant shall arrange for transportation, storage and disposal of all hazardous materials in compliance with the Hazardous Materials Transportation Act. Drivers transporting hazardous materials or wastes should follow the measures recommended by the Federal Motor Carrier Safety Administration for avoiding roll-over accidents. To avoid roll-over accidents involving cargo tank trucks:	Provide with Application Package; During construction and operation construction	KC PCDD; Environmental Protection Agency; California Department of Transportation		

- a. Avoid sudden movements that may lead to roll-overs.
- b. Control your load in turns and on straight roadways.
- c. Identify high risk areas on roads.
- d. Remain alert and attentive behind the wheel.
- e. Control speed and maintain proper "speed cushions."

Steps to Compliance:

- A. The Applicant shall implement measures as specified in the mitigation measures.
- B. The Kern County Planning and Community Development Department will verify.

MM 4.8-3 The Applicant shall implement the following practices:

- a. Construction activities shall be conducted to allow for easy clean-up of spills. Construction crews shall have sufficient tools, supplies, and absorbent and barrier materials to contain and recover spilled materials.
- b. Fuels and lubricants shall be stored only at designated staging areas. Fuel and lubricant tanks shall have appropriate secondary spill containment (e.g., curbs). Compliance with laws and regulations is required, including compliance with hazardous materials and hazardous waste storage laws, as applicable.
- c. Storage of fuel and lubricants in the staging area shall be at least 100 feet away from the edge of water bodies. Refueling and lubrication of equipment shall be restricted to upland areas at least 100 feet away from stream channels and wetlands.
- d. Any fuel truck shall carry an oil spill response kit and spill response equipment at all times.
- e. Applicants shall be required to perform all routine equipment maintenance at the well pad or other suitable locations (i.e., maintenance yards), and promptly collect and lawfully dispose of wastes in compliance with existing regulatory requirements.
- f. Berms and/or dikes (secondary containment) shall be constructed around the permanent above-ground bulk tanks and the foundations shall be installed with a passive leak detection system, so that potential spill materials shall be contained and collected in specified areas isolated from any water bodies. Tanks shall not be placed in areas subject to periodic flooding or washout. Compliance with laws and regulations is required, including compliance with hazardous materials and hazardous waste storage laws as applicable, including for secondary containment, such as Division of Oil Gas and Geothermal Resources regulation (Title 14, C.C.R. § 1773.1), which requires secondary containment in "an engineered impoundment such as a catch basin, which can include natural topographic features, that is designed to capture fluid released from a production facility."
- g. A sufficient supply of sorbent and barrier materials shall be maintained on construction sites consistent with the type and level of construction activities. Sorbent and barrier materials shall also be utilized to contain runoff from contaminated areas where appropriate.
 1. Shovels and drums shall be stored at each well pad or be readily available. If small quantities of soil become contaminated, hand tools such as shovels or other appropriate tools, shall be used to collect the soil and the material shall be stored in storage drums. Large quantities of contaminated soil may be bio-remediated on-site or at a designated remediation facility, subject to government approval, or collected utilizing heavy equipment, and stored in drums or other suitable containers prior to disposal. Should contamination occur adjacent to staging areas as a result of runoff, shovels and/or heavy equipment shall be utilized to collect the contaminated material. Contaminated soil shall be disposed of in accordance with state and federal regulations.
 2. Above-ground tanks, valves and other equipment shall be visually inspected monthly and when the tank is refilled. Inspection records shall be maintained. Applicants shall periodically check tanks for leaks or spills.
 3. Drain valves on all tanks shall be locked to prevent accidental or unauthorized discharges from the tank.
 4. Equipment maintenance shall be conducted in staging areas or other suitable locations (i.e., maintenance shops or yards) to the extent practical.
 5. The Applicant shall maintain equipment in operating condition to reduce the likelihood of fuel or oil line breaks and leakage. Any vehicles with chronic or continuous leaks shall be removed from the site and repaired before being returned to operation.
 - h. Applicants are encouraged, but not required, to use an alternate to silica sand as a proppant, after Division of Oil Gas and Geothermal Resources has determined that such an alternative does not introduce new hazards.

Provide with Application Package;
During construction and operation

KC PCDD

Steps to Compliance:

- A. The Applicant shall implement measures as specified in the mitigation measures.
- B. The Kern County Planning and Community Development Department will verify.

MM 4.8-4 The Applicant shall implement the following measures to prevent, repair, and remediate accidental leaks and spills from oil and gas operations.

- a. The Applicant shall identify gas, oil and produced water pipelines to be used for each new or reworked well site in its Site Plan, and shall show the location of any sensitive receptor located within 300 feet of any such pipeline. For any pipeline located within 300 feet of a sensitive receptor, the Applicant shall present evidence that each such pipeline has been integrity tested using pressure testing or other accepted test methods by a qualified professional within a two-year period

prior to submittal of the Site Plan, and shall provide a copy of the test result to the County. For all waste gas lines less than or equal to 4 inches in diameter, a Pipeline Management Plan shall be developed and implemented in accordance with Division of Oil Gas and Geothermal Resources regulations Title 14, Division 2, Chapter 4, Section 1774.2. The Pipeline Management Plan shall include:

1. A listing of information on each pipeline including, but not limited to:
 - i. Pipeline type.
 - ii. Grade.
 - iii. Installation date of pipeline.

Provide with Application Package;
During construction and operation

KC PCDD;
Division of Oil Gas and Geothermal Resources

Steps to Compliance:

- A. The Applicant shall implement measures as specified in the mitigation measures.
- B. The Kern County Planning and Community Development Department will verify.

- iv. Design and operational pressure.
- v. Any leak, repair, inspection and testing history.

2. A description of the testing method and schedule for all pipelines.

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

c. As part of the Site Plan, the Applicant shall identify the location and right of way for all pipelines to be used for the transport of oil, gas, and produced water, including pipelines that intersect the main transport line, based on existing data and using commercially available technology, and, based on the results of this analysis, shall identify any sensitive receptors within 300 feet of the pipeline for purposes of complying with Mitigation Measure 4.8-4.

4. Mechanical integrity testing of all such pipeline lengths within 300 feet of a sensitive receptor shall be required pursuant to Mitigation Measure 4.8.4-a.

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

MM 4.8-5	If, during grading or excavation work, the Applicant observes evidence of contamination or if soil contamination is suspected, work near the excavation site shall be terminated, the work area cordoned off and appropriate health and safety procedures implemented for the location by the contractor's Health and Safety Officer. Samples shall be collected by a trained and qualified individual. Analytical data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not present, work may proceed at the site; however, if contamination is detected above regulatory limits, the Kern County Public Health Services Department shall be notified. All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the Kern County Public Health Services Department.	Provide with Application Package;	Kern County Public Health Services;		
		During construction and operation	Kern County Environmental Health;		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Public Health Services and Environmental Health will verify.			
MM 4.8-6	The Applicant shall implement measures to prevent the release or accidental spillage of solid waste, garbage, construction debris, sanitary waste, industrial waste, naturally occurring radioactive materials, oil and other petroleum products, and other wastes into water bodies or water sources, including all applicable practices included in the most up-to-date versions of the following documents: Exemption of Oil and Gas Exploration and Production Wastes From Federal Hazardous Waste Regulations (EPA 2002). Equivalent industry standards such as Environmental Protection for Onshore Oil and Gas Productions and Leases (American Petroleum Institute 2009) and related standards may also be utilized, provided that a professional engineer, certified industrial hygienist or certified safety professional certifies to the County that such alternative standards are as or more protective of human health and the environment, as compared to the standards in the referenced Environmental Protection Agency manual. The determination of when and the extent to which a measure is "practical" is to be made by the Applicant; however, all of the below activities must comply with all applicable legal requirements, including federal and state laws and regulations, County ordinances, and the mitigation measures included in this Final EIR. a. Classify the various oil and gas exploration and production wastes for proper disposal as described in United States Environmental Protection Agency 2002, and in accordance with applicable California laws and regulations. b. Size reserve pits properly to avoid overflows. c. Use closed loop mud systems when practical, particularly with oil-based muds. d. Review safety data sheets of materials used, and select less toxic alternatives when possible. e. Minimize waste generation, such as by designing systems with the smallest volumes possible (e.g., drilling mud systems). f. Reduce the amount of excess fluids entering reserve and production pits. g. Keep non-exempt wastes out of reserve or production pits. h. Design the drilling pad to contain stormwater and rigwash. i. Recycle and reuse oil-based muds and high density brines, when practical, and when such recycling and reuse complies with hazardous waste laws and recycling laws. j. Perform routine equipment inspections and maintenance to prevent leaks or emissions. k. Reclaim oily debris and tank bottoms when practical, and when such reclamation complies with hazardous waste laws and recycling laws. l. Minimize the volume of materials stored at facilities. m. Construct adequate berms around materials and waste storage areas to contain spills. n. Perform routine inspections of materials and waste storage areas to locate damaged or leaking containers. o. Train personnel to use sensible waste management practices.	Provide with Application Package; During construction and operation	KC PCDD		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
		The determination of when and the extent to which a measure is "practical" is to be made by the Applicant; however, all of the below activities must comply with all applicable legal requirements, including federal and state laws and regulations, County ordinances, and the mitigation measures included in this Final EIR.			

MM 4.8-7	Conduct exploration and development activities as described in <i>Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development The Gold Book</i> (Bureau of Land Management 2007) or equivalent industry standard such as Environmental Protection for Onshore Oil and Gas Production Operations and Leases (American Petroleum Institute 2009) and related standards. The following specific measures should be undertaken at a minimum: a. Sufficient impervious secondary containment, such as containment dikes, containment walls, and drip pans, should be constructed and maintained around all qualifying petroleum facilities, including tank batteries and separation and treating areas consistent with the Environmental Protection Agency's Spill Prevention, Control, and Countermeasures regulation (40 Code of Federal Regulations 112). The containment structure must have sufficient volume to contain, at a minimum, the content of the largest storage tank containing liquid hydrocarbons within the facility/battery and sufficient freeboard to contain precipitation, unless more stringent protective requirements are deemed necessary by the authorized officer. Drip pans should be routinely checked and cleaned of petroleum or chemical discharges and designed to prevent access by wildlife and livestock. b. Chemical containers should not be stored on bare ground, and should be maintained in good condition and placed within secondary containment in case of a spill or high velocity puncture. c. Containment dikes are not to be constructed with topsoil or coarse, insufficiently impervious spoil material. Containment is strongly suggested for produced water tanks. Chemicals should be placed within secondary containment and stored so that the containers are not in contact with soil or standing water and product and hazard labels are not exposed to weathering. d. Maintain a clean well location. Remove trash, junk, and other materials not in current use. e. In approving a well stimulation treatment permit, the applicant shall include in the spill contingency plan required by Section 1722.9 of Title 14 of the California Code of Regulations a protocol for measuring and reporting earthquake and earth consequences that occur during the well stimulation process, for however many well stimulation treatments are proposed to occur simultaneously at any given time. The Spill Contingency Plan shall include requirements for adequate personnel and equipment that may be necessary to conduct post-earthquake inspection and repair plans to evaluate any damage that has occurred. The Spill Contingency Plan shall include spill prevention, control and countermeasure plans to address the hazardous substances associated with well stimulation activities. The post-earthquake inspection procedures shall ensure the integrity of the mechanical systems and well integrity of wells used for stimulation or wastewater injection and idle wells that might have become conduits for escaping fluids or gases. The plan shall include procedures describing the necessary steps to be taken after service is disrupted in order to make the facilities secure, operational and safe as soon as possible.	Provide with Application Package; During construction and operation	KC PCDD; Environmental Protection Agency; Kern County Fire Department		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
MM 4.8-8	Applicants shall use the appropriate American Petroleum Institute Standards, or other recognized sources imposing the same or equivalent standards, for their facility, such as the following: a. Use cements and well materials in well completions as described in Specifications for Cements and Materials for Well Cementing (American Petroleum Institute 2011). b. Prior to start-up of all new facilities, verify and prove the construction, installation, integration, testing, and preparation of systems have been completed as designed following the practices described in Facilities Systems Completion Planning and Execution (American Petroleum Institute 2013a). c. When the use of centralizers and stop-collars are required during well completion activities, follow the installation and testing requirements described in Recommended Practice for Centralizer Placement and Stop-collar Testing (American Petroleum Institute 2010a). d. Limit the environmental footprint of oil and gas exploration and production and reduce the incidence of releases of hazardous substances following the practices described in Environmental Protection for Onshore Oil and Gas Production Operations and Leases (American Petroleum Institute 2009). e. Minimize improper disposal by following the practices described in American Petroleum Institute Order No. G00004, Guidelines for Commercial Exploration and Production Waste Management Facilities (American Petroleum Institute 2001) or other recognized methods. These guidelines discuss the relevant regulations and permitting requirements; siting, construction, and technical consideration for various waste disposal options; as well as mitigation options. f. Minimize the environmental footprint of exploration and production activities following the practices described in Land Drilling Practices for Protection of the Environment (American Petroleum Institute 2010b) or other recognized sources. g. When pressure testing is required by State or federal law, prior to pressurizing or re-pressurizing petroleum product pipelines, ensure the integrity of pipelines following the practices described in Recommended Practice for the Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids, or Carbon Dioxide (American Petroleum Institute 2013b) or other recognized sources. h. To minimize releases of hazardous substances during oilfield construction, pit and sump operations shall be conducted in accordance with State Water Resources Control Board General Orders or appropriate Regional Water Quality Control Board waste discharge requirements or general orders.	Provide with Application Package; During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
MM 4.8-9	For all operations subject to the Oil and Gas Conformity Review, the Applicant shall comply with the pipeline management plan, including inspection and maintenance requirements, as administered by the Division of Oil Gas and Geothermal Resources pursuant to 14 California Code of Regulations 1774.	Provide with Application Package; During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			

4.8-2	MM 4.8-10	The Applicant shall incorporate annual maintenance checks for leaks and corrosion that cause releases into current operations, maintenance, and inspection schedules as provided by the Division of Oil Gas and Geothermal Resources pursuant to 14 California Code of Regulations Sections 1774.1 and 1774.2, the Applicant shall visually inspect all above-ground pipelines for leaks and corrosion at least once per year, comply with the pipeline testing requirements included therein, shall maintain records of such inspections and testing; and shall make inspection and testing records available to the County for review upon request.	Provide with Application Package; During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.8-11	As part of the Hazardous Materials Business Plan and the spill prevention, control, And countermeasures Plan, the Applicant shall require annual worker training requirements to: increase awareness of the most common types of failures and methods to avoid mistakes, shall maintain records of employee training, and shall make such records available to the County for review upon request.	Provide with Application Package; During construction and operation	KC PCDD; Kern County Fire Department		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.8-12	An Applicant who plans to perform cyclic steam injection activities above reservoir fracture pressures shall conduct such activities in accordance with the requirements set forth in the Division of Oil Gas and Geothermal Resources site-specific Project Approval Letter for the injection project. The following requirements from a Project Approval Letter for an injection project are examples of the types of conditions that would be triggered if a surface expression were to occur, though such conditions may be modified by the Division of Oil Gas and Geothermal Resources to reflect site-specific conditions and changing regulatory requirements. a. Cease cyclic steaming operations in accordance with the site-specific Project Approval Letter. Streaming can resume following the Division of Oil Gas and Geothermal Resources specifications outlined in the Project Approval Letter. b. All new or reactivated surface expressions that discharge oil in a reportable quantity shall be reported as an oil spill to the California Emergency Management Agency at (800) 852-7550. c. Any measures to address surface expressions from the well and associated Project shall be reviewed by the Division of Oil Gas and Geothermal Resources prior to initiating. d. Immediately control any water, steam, or oil flowing from a surface expression and contained. All discharged material shall be removed and disposed of in a manner approved by all state and local agencies. e. Cordon off and clearly mark all surface expressions to prevent inadvertent access. f. Conduct air sampling of any emissions associated to a recent surface expression in accordance to the local air board requirements to ensure a health hazard condition does not exist. g. Report immediately to the Division of Oil Gas and Geothermal Resources all surface expressions within 300 feet of the Project site. If the surface expression continues to flow after five days, all wells within a 300-foot radius shall cease steaming until the surface expression ceases to flow. If the surface expression continues to flow, the damage will be evaluated at the Supervisor's discretion, as assigned by Section 3106 of the Public Resources Code and existing laws and regulations.	During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources; Kern County Environmental Health		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department and the			
4.8-2	MM 4.8-13	The Applicant shall comply with the Division of Oil Gas and Geothermal Resources requirements for assuring safe drilling and drill casing practices, well design, construction and well management requirements, blowout requirements, and all other provisions of 14 California Code of Regulations 1744 and other applicable Division of Oil Gas and Geothermal Resources regulations. The Applicant shall also reduce the incidence of well control loss by following the practices described in Recommended Practice for Well Control Operations (American Petroleum Institute 2012).	During construction and operation	KC PCDD; Division of Oil Gas and Geothermal Resources		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.8-14	The Applicant shall report contamination caused by oil and gas activities, including previously unknown injection wells, of a reportable quantity of hazardous substances, as specified in the Code of Federal Regulations Title 40 and/or the California Code of Regulations Titles 22 and 23, which is discovered during Project construction activities and operations. Notification must be made to Kern County Environmental Health Division and the appropriate implementing regulatory agency that has responsibility or oversight of the specific contamination conditions. The Applicant shall remediate such contamination outside Tier 1 areas as required by the Kern County Environmental Health Division and the appropriate implementing regulatory agency.	During construction and operation	KC PCDD; Kern County Environmental Health; Environmental Protection Agency		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			

4.8-3	MM 4.8-15	The Applicant who intends to use acutely hazardous chemicals, including chemicals at or above the specified threshold quantities or a process which involves a Category 1 flammable gas or a flammable liquid with a flashpoint below 100 degrees Fahrenheit (37.8 degrees Celsius) on site in one location, in a quantity of 10,000 pounds (4535.9 kilograms) or more according to 8 California Code of Regulations Section 5189, Appendix A, within 0.25 mile from a school must: - Evaluate whether other alternative chemicals that are less hazardous could be used. - Ensure that the smallest quantity of necessary acutely hazardous materials are stored on site. - Notify the occupants of the buildings when and where acutely hazardous materials would be used. - Notify Kern County Fire Department about the details of the use of acutely hazardous materials (e.g., when, where, how much). - Ensure that all employees who would contact the acutely hazardous materials are trained on the handling, transport, storage, and disposal of the materials. - Ensure that all employees who would contact the acutely hazardous materials are trained and are provided the proper personal protective equipment. - Ensure that all employees who would contact the acutely hazardous materials are trained and have exercised on the Spill Prevention, Control, and Countermeasures Plan that addresses these chemicals.	Provide with Application Package; During construction and operation	KC PCDD; Kern County Fire Department		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department and Kern County Fire Department will verify.			
4.8-3	MM 4.8-16	The applicant shall not use any well stimulation fluid unless the applicant presents one of the following: - Safety Data Sheet that accurately describes the physical and chemical properties of the well stimulation fluid; or - Safety Data Sheets that accurately describe the physical and chemical properties of all chemical compounds in the well stimulation fluid; or - Toxicological report prepared by a qualified laboratory and/or the fluid vendor confirming the environmental profile of the well stimulation fluid is known; or - Results of an aquatic bioassay by a qualified laboratory confirming the environmental profile of the well stimulation fluid is known. For purposes of this mitigation measure, the term “environmental profile” means the physical and chemical properties of a compound that determine its risk to human health and the environment. This mitigation measure shall be superseded by any list of approved well stimulation treatment fluids, chemicals or additives published by the State of California or by any applicable State of California regulation pertaining to chemical use in well stimulation treatment.	Provide with Application Package; During construction and operation	KC PCDD; Kern County Fire Department		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department and Kern County Fire Department will verify.			
4.8-5	MM 4.8-17	The Applicant shall determine whether any proposed construction or alteration meets requirements for notification of the Federal Aviation Administration. If a proposed construction or alteration is found to require notification, the Applicant shall notify the Federal Aviation Administration and request that the Federal Aviation Administration issue a Determination of No Hazard to Air Navigation. If the Federal Aviation Administration determines that the construction or alteration would result in a potential hazard to air navigation, the Applicant would be required to work with the Federal Aviation Administration to resolve any adverse effects or airport operations. The Applicant shall notify the Federal Aviation Administration and the nearest Airport, by completing and submitting Federal Aviation Administration Form 7460-1 if oil and gas related exploration, production, or associated development activities are planned that meet one or more of the following criteria: - Any construction or alteration exceeding 200 feet above ground level. - Any construction or alteration within 20,000 feet of all public use airports except Poso-kern Airport which exceeds a 100:1 surface from any point on the runway. - Any construction or alteration within 10,000 feet of the Poso-Kern Airport which exceeds a 50:1 surface from any point on the runway. - Any construction or alteration within 5,000 feet of a public use heliport which exceeds a 25:1 surface. - When requested by the Federal Aviation Administration. - Any construction or alteration located on a public use airport or heliport regardless of height or location.	Provide with Application Package; During construction and operation	KC PCDD; Federal Aviation Administration		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department and Federal Aviation Administration will verify.			
	MM 4.8-18	The Applicant shall determine the distance from the proposed operation to the nearest boundary of the Joint Service Restricted R-2508 Complex, using a map of this Complex provided by the County. The Applicant shall notify the Joint Service Restricted R2508 Complex representative identified by the County if oil and gas related exploration, production, or associated development activities are planned that meet one or more of the following criteria: - Any structure within 75 miles of the R-2508 Complex that is greater than 50 feet tall. - Any project within 50 miles of the R-2508 Complex that emit radio and communication frequencies. - Any project that would create environmental impacts such as visibility or elevated obstructions within 25 miles of the R-2508 Complex.	Provide with Application Package; During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			

	MM 4.8-19 All oil and gas related development activities shall review the Kern County Airport Land Use Compatibility Plan for compliance with all applicable policies.	Provide with Application Package; During construction and operation	KC PCDD; Kern County Airport		
Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.					
4.8-8	MM 4.8-20 The Applicant is required to implement the following measures: a. Comply with Kern County Fire Codes. b. Maintain firefighting apparatus and supplies required by the Kern County Fire Department. c. Maintain of a list of all relevant fire-fighting authorities for each work site. d. Have available equipment to extinguish incipient fires and or construction of a fire break, such as: chemical fire extinguishers, shovels, axes, chain saws, etc. e. Carry water or fire extinguishers and shovels in non-passenger vehicles in the field. f. Have and maintain an adequate supply of fire extinguishers for welding, grinding, and brushing crews. g. Use available resources to protect individual safety and to contain any fire that occurs and notify local emergency response personnel. h. Remove any flammable wastes generated during oil and gas activities regularly. i. Store all flammable materials used in oil and gas activities away from ignition sources and in approved containers. j. Allow smoking only in designated smoking areas. k. Prohibit smoking where flammable products are present and when the fire hazard is high. Train personnel regarding potential fire hazards and their prevention. l. All internal combustion engines, stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order. m. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition. n. Fire rules shall be posted on the Project bulletin board at the contractor’s field office and areas visible to employees. o. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials. p. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats.	Provide with Application Package; During construction and operation	KC PCDD; Kern County Fire Department		
	Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department and Kern County Fire Department will verify.				
	MM 4.8-21 The Applicant should restrict the use of chainsaws, chippers, vegetation masticators, grinders, tractors, torches, and explosives at its locations, and ensure the sites where this equipment is used are equipped with portable or fixed fire extinguishers and/or a water tank, with hoses, fire rakes, and other tools to extinguish and or control incipient stage fires. The Worker Environmental Awareness Program shall include fire prevention and response training for workers using these tools.	Provide with Application Package; During construction and operation	KC PCDD		
Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.					
4.8-9	MM 4.8-22 Applicants shall ensure that trash is stored in closed containers and removed from the site at regular intervals. Open containers shall be inverted and construction ditches shall not be allowed to accumulate water. Construction and maintenance operations shall not generate standing water. Naturally occurring depressions, drainages, or pools at the site shall not be drained or filled without consulting with the appropriate resource agency (Kern County, United States Army Corps of Engineers, United States Fish and Wildlife Service, California Department of Fish and Wildlife) as applicable, and obtaining the appropriate permits.	During construction and operation	KC PCDD		
	Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.				
Hydrology and Water Quality					
4.9-1	MM 4.9-1 The Applicant shall comply with all applicable federal, state, regional and local agency water quality protection laws and regulations, and commonly utilized industry standards, including (where applicable) obtaining coverage under the stormwater construction general permit and industrial general permit issued by the State Water Resources Control Board and complying with industry stormwater management standards for construction and operational activities. The applicant shall obtain all required permits from Division of Oil Gas and Geothermal Resources, and such permits shall include measures that will safeguard protected groundwater with appropriate casing, seal and related down-hole technical specifications.	During construction and operation	KC PCDD; State Water Resources Control Board; Environmental Protection Agency		
	Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Applicant shall a Stormwater Management Plan.				

- C. The Applicant shall submit in writing approval from federal and state agencies verifying permit approval.
- D. The Kern County Planning and Community Development Department will verify.

MM 4.9-2 A. Oil and Gas activities in Tier 1 shall comply with the following.

1. In areas subject to National Pollutant Discharge Elimination System stormwater permitting requirements, project applicants shall file a Notice of Intent to the State Water Resources Control Board to comply with the statewide General Permit for Discharges of Stormwater Associated with Construction Activities (Construction General Permit State Water Resources Quality Control Board Order No 2009-009-DWO) prior to undertaking all ground-disturbing activities greater than one acre and shall prepare and implement a Stormwater Pollution Prevention Plan for construction activities on the Project site in accordance with the Construction General Permit. For facilities requiring coverage under the Construction General Permit, the site specific Stormwater Pollution Prevention Plan shall include measures to achieve the following objectives: (1) all pollutants and their sources, including sources of sediment associated with construction activity are controlled; (2)

all non-stormwater discharges are identified and either eliminated, controlled and treated, (3) site Best Management Practices are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity and (4) stabilization Best Management Practices to reduce or eliminate pollutants after construction are completed. The Stormwater Pollution Prevention Plan shall be prepared by a qualified preparer and shall include the minimum Best Management Practices required for the identified risk level. The Stormwater Pollution Prevention Plan shall include a construction site monitoring program that identified requirements for dry weather visual observations of pollutants at all discharge locations and, as appropriate, depending on the project risk level, sampling of site effluent and receiving waters. A qualified Stormwater Pollution Prevention Plan practitioner shall be responsible for implementing and all monitoring for the Best Management Practices as well as all inspection, maintenance and repair activities at the project site. If applicable, each project shall also implement and fully comply with the Industrial Storm Water Permit (Order No 97-03-DWO) and Kern County Municipal Stormwater Permit (Order No 5-01-120). All plans under these requirements shall be submitted to Kern County Public Works for review and approval.

2. Any operator of a facility that meets the following requirements is not required to be covered by the Construction General Permit (State Water Regional Control Board Memorandum dated 5-18-2010):
- discharges of stormwater runoff from oil and gas exploration, production, processing or treatment operations or transmission facilities, including field activities or operations that may be considered construction activity;
 - are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products;
 - are only contaminated by or only come into contact with sediment; and
 - pursuant to 40.C.F.R. § 122.26(c)(1) (iii) that do not contribute to a violation of a water quality standard.
- Any change to this State Water Regional Control Board determination will require full compliance with National Pollutant Discharge Elimination System requirements.
3. Any operator not subject to National Pollutant Discharge Elimination System stormwater permitting requirements shall implement Best Management Practices during construction and operation. All selected practices shall be shown on a drainage implementation plan and self-certified as complete and feasible by a licensed professional qualified in drainage and flood control issues. The plan shall be submitted to the Kern County Planning and Community Development department.

The following Best Management Practices shall be implemented and shown on the drainage implementation plan :

- Utilizing established facilities design, construction or similar standards as appropriate (e.g., American Society for the Testing and Materials (ASTM) American Petroleum Institute (API)).
- Implementation good housekeeping and maintenance practices:
 - Preventing trash, waste materials and equipment from construction storm water.
 - Maintaining wellheads, compressors, tanks and pipelines in good condition without leaks or spills.
 - Designing and maintaining graded pads to not actively erode and discharge sediment
 - Maintaining vehicles in good working order
 - Providing secondary containment for all –above –ground storage tanks and maintaining such containment features in good operating condition
- Implementing spill prevention and response measures
 - Utilizing preventative operating practices such as tank level monitoring, safe chemical handling and conducting regular inspections.
 - Developing and maintaining a spill response plan
 - Conducting spill response training for employees and have a process to ensure contractors have the necessary training
 - Maintaining spill response equipment on site.
- Implementing material storage and management practices:
 - Preventing unauthorized access
 - Utilizing “run-on” and “run-off” control berms and swales
 - Stabilizing exposed slopes through vegetation and other appropriate methods (e.g., hay bales or rolls).

Provide with Application Package;
During construction and operation

KC PCDD;
Kern County Public Works Department

Steps to Compliance:

- The Applicant shall implement measures as specified in the mitigation measures.
- The Applicant shall submit a drainage plan.
- The Applicant shall submit in writing approval from federal and state agencies verifying permit approval.
- The Kern County Engineering, Surveying and Permit Services Department will verify.

B. Oil and gas activities outside Tier 1 shall comply with all applicable state and federal stormwater management laws. For any oil and gas activity outside Tier 1 that is not subject to state or federal stormwater management laws, regulations or general permits, the Applicant shall prepare a drainage plan that is designed to minimize runoff and minimize the potential for impeding or redirecting 100-year flood flows. The drainage plan shall be prepared in accordance with the Kern County Grading Code, the Green Code and approved by the Kern County Department of Public Works, Floodplain Management Section. The plan shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving offsite and into receiving waters. The requirements of the Plan shall be incorporated into design specifications. Recommended best management practices for the construction phase must be shown on a drainage plan, and shall include the following:

- a. Erosion Control -
 1. Scheduling of construction activities to avoid rain events.
 2. Limiting vegetation removal to the minimum required.
- b. Sediment Control -
 1. Secure stockpiling of soil.
 2. Installation of a stabilized construction entrance/exit and stabilization of disturbed areas.
- c. Non-stormwater Control -
 1. Proper fueling and maintenance of equipment and vehicles.
 2. Proper concrete handling techniques.
- d. Waste and Material Management -
 1. Properly managing construction materials, designating construction staging areas in or around the Project site.
 2. Stockpiling and disposing of demolition debris, concrete, and soil properly.
 3. Prompt removal and proper disposal of litter.
 4. Proper disposal of demolition debris, concrete and soil.
 5. Proper protections for fueling and maintenance of equipment and vehicles.
 6. Provide and maintain adequate secondary containment to minimize or eliminate pollutants from moving offsite and into receiving waters.
- e. Post-Construction Stabilization -
 1. Ensuring the stabilization of all disturbed soils per revegetation or application of a soil binder.

C. If construction activities will alter federal jurisdictional waters, project applicants shall comply with the federal Clean Water Act Section 404 and Section 401 permitting and certification requirements. If construction activities will alter state waters, project applicants shall comply with California Department of Fish and Wildlife Streambed Alteration requirements.

MM 4.9-3	All drilling operations must either use a closed loop system to avoid discharges of drilling muds and fluids, or obtain coverage under the State Water Resources Control Board low threat discharge General Order (Waste Discharge Requirements General Order 2003-0003-DEW), obtain individual Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board for the unit, or obtain coverage under a general order issued by the Central Valley Regional Water Quality Control Board applicable to drilling ponds. Any surface ponds or sumps must be cleared of fluids and muds in accordance with the State Water Resources Control Board general order, applicable Water Discharge Requirements and Division of Oil Gas and Geothermal Resources regulations. Compliance with the State Water Resources Control Board or Central Valley Regional Water Quality Control Board low-threat discharge orders or Water Discharge Requirements, if closed-loop systems are not used, and applicable laws, regulations and standards will reduce potential surface water quality impacts from contact with drilling muds or fluids during drilling and construction to less than significant levels. After consultation with and approval by the Regional Water Board with jurisdiction over injection and groundwater, applicant shall provide for a tracer or some other reasonable method to allow well stimulation fluids to be distinguished from other fluids or chemicals for well stimulation permits. This could consist of an added tracer using an inert constituent that could be used to identify the presence of well stimulation fluids. Alternatively, it could be an intrinsic tracer, or some naturally occurring component that makes the well stimulation fluids chemically unique. Potential geochemical changes in the subsurface during injection or migration shall be considered. Use of a tracer shall be required to be disclosed to the public under Section 1788 of the SB 4 regulations. The regulations specifically require that the applicant require the composition and disposition of all well stimulation treatment fluids other than water, including "any radiological components or tracers injected into the well as part of the well stimulation treatment, a description of the recovery method, if any, for those components or tracers, the recovery rate, and specific disposal information for the recovered components or tracers a radiological component or tracer injected" (Section 1788 (15)). For any well stimulation treatment activity, the applicant shall not conduct well stimulation treatment activity until the State Water Resources Control Board, in consultation with the Central Valley Regional Water Quality Control Board, has approved either a groundwater monitoring plan or exclusion from groundwater monitoring for a given well, consistent with the State Water Resources Control Board Model Criteria for Groundwater Monitoring in Areas of Oil and Gas Well Stimulation.	During construction and operation	KC PCDD; State Water Resources Control Board; Central Valley Regional Water Quality Control Board		
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. Obtain Waste Discharge Permit. C. The Kern County Planning and Community Development Department will verify.			

	MM 4.9-4 For any activity for which Chapter 19.98 applies, the Applicant shall not conduct any Class II injection activity regulated by the Underground Injection Control program, including enhanced oil recovery activities that discharge into any underground source of current or future beneficial use groundwater, including drinking water, unless the aquifer has been exempted by the United States Environmental Protection Agency or injection has otherwise been authorized by the U.S. Environmental Protection Agency or by the Division of Oil Gas and Geothermal Resources, in consultation and agreement by the State Water Resources Control Board, consistent with Public Resources Code 3131.	During construction and operation	KC PCDD; Environmental Protection Agency; Division of Oil Gas and Geothermal Resources												
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.													
	MM 4.9-5 For any activity for which Chapter 19.98 applies, the Applicant shall not discharge produced water into any surface disposal facility unless the facility has received the Waste Discharge Requirements from the Central Valley Regional Water Quality Control Board, or the need for Water Discharge Requirements has been waived by the Central Valley Regional Water Quality Control Board. As required by the SB 4 regulations, well stimulation treatment fluids and produced fluids from wells that have been stimulated cannot be stored, discharged, or disposed into surface ponds or pits.	During construction and operation	KC PCDD; Central Valley Regional Water Quality Control Board												
	MM 4.9-6 For any oil and gas activity within a Special Flood Hazard Area, the Applicant shall ensure that all constructed facilities are elevated or floodproofed in compliance with the requirements and standards found in the Kern County Floodplain Management Ordinance and Chapters 19.50 and 19.70 of the Kern County Zoning Code.	Provide with Application Package; During construction and operation	KC PCDD												
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.													
Noise															
4.12-1	MM 4.12-1 Construction: The Site Plan Application shall include a Site Vicinity Figure showing the location of any sensitive receptor(s) within the distances listed in the construction noise setbacks table, as shown below, of the construction site (potential impact area) for the proposed new well or other ancillary facility or equipment (excluding pipelines). This Figure need not be prepared for Tier 1 areas unless a sensitive receptor is located within 3,270 feet of a construction site inside the Tier 1 area. a. If there are no sensitive noise receptors within this potential impact area, then no construction mitigation measures shall be required. b. If there are sensitive human noise receptors within the potential impact area, then additional information must be provided showing the type of equipment being used and the noise contours with levels not exceeding 65 dB DNL at the nearest exterior wall of the sensitive receptor or more than 1 dB DNL higher than the ambient noise levels, if in excess of 65 dB DNL. If noise levels are shown to exceed 65 dB DNL or more than 1 dB DNL higher than the ambient noise levels in excess of 65 dB DNL, then one or more of the following mitigation measures shall be taken: 1. Placement of a temporary sound attenuation wall(s) shall be placed at the optimal distance to the sensitive receptor, as determined by an acoustical expert. 2. Construction of a temporary berm shall be placed at the optimal distance to the sensitive receptor, as determined by an acoustical expert. 3. Modification of equipment to reduce noise impacts. 4. Implementation of a quiet mode drilling plan or other sound reduction technology or practices as documented in a report submitted to the County. 5. Arranging for the voluntary, temporary relocation of the occupants of the sensitive receptor during the construction period. 6. Use the following setback distances for the activities specified:	Provide with Application Package; During construction and operation	KC PCDD												
		Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.													
		<table><tr><th colspan="2">Construction Noise Setbacks</th></tr><tr><th>Activity</th><th>Setback Distance (feet)</th></tr><tr><td>Drilling (Well Advancement)</td><td>1550</td></tr><tr><td>Drilling (Pull Out Of Well/Borehole)</td><td>820</td></tr><tr><td>Large-Scale Exploratory Drilling¹</td><td>3270</td></tr></table>					Construction Noise Setbacks		Activity	Setback Distance (feet)	Drilling (Well Advancement)	1550	Drilling (Pull Out Of Well/Borehole)	820	Large-Scale Exploratory Drilling ¹
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		Well Workover	930			
		Hydraulic Fracturing	1090			
		Note:				
		Note: ¹ Kenai Drill Rig #7				
		Information submitted with the Site Plan Application must detail the combination and methods used to determine the level of reduction and shall not exceed 65 dB DNL or any ambient levels in excess of 65 dB DNL or more than 1 dB DNL higher than the ambient noise levels, if in excess of 65 dB DNL .				
	MM 4.12-2	Operation: New oil and gas wells shall be a minimum 210 feet from the closest sensitive receptor. Geophysical testing methods using vibroseis vehicles to generate sound waves shall be a minimum 150 feet from the closest occupied building, water well, sewer system, and septic tank. Geophysical testing methods using shotholes that employ explosives shall be a minimum 300 feet from the closest occupied building, water well, sewer system, and septic tank, and shall be in full compliance with all laws governing explosives.	Provide with Application Package; During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
Public Services						
4.14-1	MM 4.14-1	Applicant shall contribute to funding the acquisition of a Combination Walk-in/Non-Walk-in Industrial Firefighting vehicle capable of responding with a minimum of five firefighters with the tools and equipment necessary for industrial firefighting and rescue. Each Applicant shall pay \$150 per well on each Oil and Gas Conformity Review permit until the total cost of the vehicle purchase is reached, not to exceed \$850,000, to be paid through mitigation fees on Oil and Gas Conformity Review permits. Subsequent Applicants shall not be subject to this mitigation measure.	Provide with Application Package; During construction and operation	Kern County KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.14-2	Applicant shall provide funding in the amount of \$425 per Oil and Gas Conformity Review permit issued for the Sheriff’s Rural Crime Unit. Funding shall be used for one Sergeant, two Senior Deputies (investigators), three Deputies, One Support Technician (clerical), and helicopter usage, based on the amount of funding provided by this permit mitigation fee. The fee shall be in addition to any general funds received by the Sheriff’s Department. The Sheriff’s department shall annually report on the expenditure of funds for the Rural Crimes Unit, including incident reports and response times. If other sources of funding for the Rural Crimes Unit are secured, then the mitigation fee amount shall be adjusted to pay only the gap between actual costs and funding provided from other sources. The first 100 permits issued in a calendar year to certified small producers under the Small Producers Program included in the Project shall not pay this mitigation fee based on their very low proportionate use of the Rural Crimes Unit (100 permits are estimated to generally be less than 5% of the permits issued annually).	Provide with Application Package; During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
Traffic and Transportation						
4.16-1	MM 4.16-1	The Applicant shall pay a road maintenance mitigation fee of \$1,500 per permit for new wells to pay for roadway maintenance and related improvements to address wear and tear on roads caused by oil and gas industry traffic. The Kern County Public Works Department shall annually report on the expenditure of funds from the Oil and Gas Roadway Maintenance Fee. Expenditures from the fund shall be as determined by the Roads Commissioner, using as a reference the list of roadways identified in the Environmental Impact Report as being used for traffic by the oil and gas industry. If Kern County secures funding from a sales tax dedicated to transportation funding, then the amount of the traffic mitigation fee shall be re-evaluated at the time the County becomes a self-help county. The first 100 permits issued in a calendar year to certified small producers under the Small Producers Program included in the Project shall not pay this mitigation fee based on their very low proportionate roadway use (100 permits are estimated to generally be less than 5% of the permits issued annually).	Provide with Application Package; During construction and operation	KC PCDD; Kern County Public Works Department		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.16-2	Applicants who are using an arterial or collector, or Caltrans route, for access to a construction site, shall consult with the Kern County Public Works Department to determine if a Construction Traffic Control Plan is required based on the timing and volume of larger vehicle rigs and the volume of traffic to address public safety and congestion management. If a Plan is required, the Applicant shall prepare and submit a Construction Traffic	Provide with Application Package; During construction and operation	Kern County Public Works Department		

Control Plan to the Kern County Public Works Department and to the California Department of Transportation (District 9 office) for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and shall include, but not be limited to, the following issues:

- a. Timing of deliveries of heavy equipment and building materials.
- b. Placing temporary signing, lighting, and traffic control devices as necessary to indicate the presence of heavy vehicles and construction traffic.
- c. Determining the need for construction work hours and arrival/departure times outside peak traffic periods.
- d. Ensuring access for emergency vehicles to the Project site.
- e. Any temporary closure of travel lanes or disruptions to street segments and intersections during well development.
- f. Maintaining access to adjacent property.

Steps to Compliance:

- A. The Applicant shall implement measures as specified in the mitigation measures.
- B. The Kern County Public Works Department will verify.

Utilities and Service System

4.17-2	MM 4.17-1	Prior to the issuance of building permits for an operations and maintenance building, the method of sewage disposal shall be as required and approved by the Kern County Public Health Services Department. Compliance with this requirement will necessitate that the Project proponent obtain the necessary approvals for the design of the septic system from the Kern County Department of Public Works. The septic system disposal field shall be located a minimum of 100 feet from a classified stream or 25 feet from a non-classified stream and shall not be located where it would impact State wetlands or special-status plant species.	Provide with Application Package; During construction and operation	Kern County Public Works Department		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
4.17-4	MM 4.17-2	Applicant shall increase the re-use of produced water, and reduce its use of municipal and industrial-quality ground or surface water use to the extent feasible. By the end of 2016, the Applicants shall work with the County to review water use data submitted to Division of Oil Gas and Geothermal Resources under Senate Bill 1281 and identify the five biggest oil industry users of municipal and industrial water by volume. The five biggest oil industry users of municipal and industrial water shall work together to develop and implement a plan identifying new measures to reduce municipal and industrial water use by 2020. The plan shall address the following activities, as appropriate: steam generation; drilling and completions (including hydraulic fracturing); dust control; compaction activities related to construction; and landscaping. Through the KernFLOWS initiative or other efforts (e.g., Groundwater Sustainability Agency), the five biggest oil industry users of municipal-and-industrial water shall also work with local agricultural producers and water districts to identify new opportunities to increase the use of produced water for agricultural irrigation and other activities, as appropriate. Any produced water treated and used for agricultural irrigation or other activities shall be tested and monitored to assure compliance with applicable standards for such agricultural irrigation or other uses.	During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.17-3	In the County's required participation for the formulation of a Groundwater Sustainability Agency, the Applicant shall work with the County to integrate into the Groundwater Sustainability Plan for the Tulare Lake-Kern Basin, best practices from the oil and gas industry to encourage the re-use of produced water from oil and gas activities, and (with appropriate treatment) to produce new water supplies for other uses such as agricultural irrigation and groundwater recharge. The produced water re-use goal is 30,000 acre-feet per year, which would offset more than the current use of imported water and groundwater from non-oil bearing zones by the oil and gas industry.	Provide with Application Package; During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
	MM 4.17-4	The Applicant shall work with the County on the Groundwater Sustainability Plan to increase Applicant use of reclaimed water and reduce the Applicant's use of municipal-and-industrial quality imported surface water or groundwater. The Applicant will provide copies of water use reports produced under SB 1281 to the Groundwater Management Agency, which will then integrate this information into the Groundwater Sustainability Plan required under the Sustainable Groundwater Management Act.	Provide with Application Package; During construction and operation	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			
4.17-6	MM 4.17-5	During construction activities for Project facilities, the Applicant shall not store construction waste onsite for longer than the duration of the construction activity, or transport any waste to any unpermitted facilities. The Applicant shall also reduce construction waste transported to landfills by recycling solid waste construction materials, such as taking materials to recycling and reuse locations listed in the brochure on recycling construction and demolition materials available on the Kern County Waste Management Department website.	During construction	KC PCDD		
			Steps to Compliance: A. The Applicant shall implement measures as specified in the mitigation measures. B. The Kern County Planning and Community Development Department will verify.			