Initial Study Summary – Environmental Checklist

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING
976 OSOS STREET • ROOM 200 • SAN LUIS OBISPO • CALIFORNIA 93408 • (805) 781-5600
Promoting the Wise Use of Land • Helping to Build Great Communities

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Project Title & No. Plains Exploration & Production - Phase V Oil Field Expansion Conditional Use Permit ED12 083 (DRC2012-00035)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The proposed project could have a "Potentially Significant Impact" for at least one of the environmental factors checked below. Please refer to the attached pages for discussion on mitigation measures or project revisions to either reduce these impacts to less than significant levels or require further study.

☒ Aesthetics	☒ Geology and Soils	☒ Recreation
☒ Agricultural Resources	☒ Hazards/Hazardous Materials	☒ Transportation/Circulation
☒ Air Quality	☒ Noise	☒ Wastewater
☒ Biological Resources	☒ Population/Housing	☒ Water /Hydrology
☒ Cultural Resources	☒ Public Services/Utilities	☒ Land Use

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the Environmental Coordinator finds that:

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

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

☒ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

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

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

John McKenzie — John McKenzie — Prepared by (Print) — Signature — Date

Steve McMasters — Ellen Carroll, Environmental Coordinator (for) — Reviewed by (Print) — Signature — Date

Project Environmental Analysis

The County's environmental review process incorporates all of the requirements for completing the Initial Study as required by the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study includes staff's on-site inspection of the project site and surroundings and a detailed review of the information in the file for the project. In addition, available background information is reviewed for each project. Relevant information regarding soil types and characteristics, geologic information, significant vegetation and/or wildlife resources, water availability, wastewater disposal services, existing land uses and surrounding land use categories and other information relevant to the environmental review process are evaluated for each project. Exhibit A includes the references used, as well as the agencies or groups that were contacted as a part of the Initial Study. The County Planning Department uses the checklist to summarize the results of the research accomplished during the initial environmental review of the project.

Persons, agencies or organizations interested in obtaining more information regarding the environmental review process for a project should contact the County of San Luis Obispo Current Planning Division, Rm. 200, County Government Center, San Luis Obispo, CA, 93408-2040 or call (805) 781-5600.

A. PROJECT

DESCRIPTION: Request by Plains Exploration & Production Company for a Conditional Use Permit to allow for the expansion (Phase V) of an existing oil field that will include the following elements: addition of 11 new well pads and modification of 38 existing pads to provide for up to 350 new oil wells; installation of additional production and steam lines to the new wells; expansion of existing electrical power system; replacement of existing pipe bridge and installation of new pipe bridge over Pismo Creek; and replacement of existing office trailers with larger office facilities. This expansion is expected to increase daily oil production from the currently approved 5,000 barrels to 9,000 barrels. One previously approved element from the Phase IV permit (three steam generators) would be constructed at the same time as the proposed expansion. No hydraulic fracturing is proposed. The project is located on both sides of Price Canyon Road, extending approximately 3/4 mile to the north and ¼ mile to the south of Ormonde Rd., northeast of Pismo Beach, in the San Luis Bay (inland) planning area.

ASSESSOR PARCEL NUMBER(S): 044-191-004 & -005; 044-201-002; 044-211-002, -010, -013; 044-241-001, -002, -006, -011, -027, - 031, -038

Latitude: 35 deg 11' 0.2580"N Longitude: 120 deg 37' 15.5280"W **SUPERVISORIAL DISTRICT** # 3

B. EXISTING SETTING

PLANNING AREA: San Luis Bay (Inland), Rural

LAND USE CATEGORY: Agriculture, Rural Lands

COMBINING DESIGNATION(S): Flood Hazard , Energy Extractive Area

TOPOGRAPHY: Gently to steeply sloping

VEGETATION: Grasses , oak woodland , riparian

PARCEL SIZE: Variable - 13 parcels

EXISTING USES: Oil field, agricultural uses, undeveloped

SURROUNDING LAND USE CATEGORIES AND USES:

North: Agriculture, Rural Lands; undeveloped, agricultural uses	*East:* Agriculture, Rural Lands; undeveloped, single-family residence(s)

South: Agriculture; agricultural uses undeveloped	*West:* Agriculture; undeveloped

C. ENVIRONMENTAL ANALYSIS

During the Initial Study process, several issues were identified as having potentially significant environmental effects (see following Initial Study). Potentially significant issues associated with the proposed have been identified and further analysis is necessary to determine if these issues can be minimized to less than significant levels.

Background

The following environmental documents have been prepared as a part of approving the initial and subsequent phases of the project currently in operation:

- 1978 Final EIR prepared for Phase I (Arroyo Grande Thermal Project [Teal Petroleum]) for 54 wells;

- 1981 Final EIR prepared for Phase II (Arroyo Grande Thermal Project Grace Petroleum Corp. Development Plan) for 40 additional wells and steam generator; this document included conceptual approval of Phases III, IV and V for 165 future wells;

- 1984 Final EIR American Pacific International, Inc. AG Oil Field for eight additional wells and tank facility;

- 1994 Final Supplemental EIR prepared for Phase III (Shell Western Development Plan)for 65 additional wells and three steam generators;

- 2004 Final EIR prepared for Phase IV (Plains Exploration and Production Phase IV Development Plan for 95 additional wells, 30 injection wells, and three steam generators;

- 2005 EIR Addendum prepared (on 2004 FEIR)(Plains Exploration and Production Phase IV Conditional Use Permit - D010386D) for a water reclamation system.

Current Operation

The current operation includes up to 100 active producing wells and up to 40 active injector wells. Once extracted, the oil is separated from the water (called produced water). The produced water is then reinjected back into the oil formation either as is or as steam. Once the approved water treatment plant is constructed some of this produced water will be treated and released to the surface (Pismo Creek). Oil extraction efforts also extract or produce natural gas (methane) which is captured by a vapor recovery system and then either compressed, reinjected or burned off. Of the oil and injection wells approved in Phase IV, 45 oil wells and 12 injection wells have yet to be installed. Per previous approvals, one of the six existing steam generators will be removed and three additional generators will be installed. Currently about 1000 barrels of oil a day are produced and transported by truck (7 daily trips) to the Conoco Phillips Battles pump station in Santa Maria. The current operation employs approximately 38 regular employees. This number is greater when drilling, construction or workover activities are included. An ongoing component of this operation includes the closure of wells that no longer produce commercially viable amounts of oil.

Each new well requires 4-6 days of continuous drilling and several days before and after to set-up and breakdown the portable rig. True vertical well depths range from 1,000 to 1,500 feet. However directional drilling is the more common practice making the length of each well longer.

COUNTY OF SAN LUIS OBISPO
INITIAL STUDY CHECKLIST

1. AESTHETICS *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Create an aesthetically incompatible site open to public view?	☒	☐	☐	☐
b) Introduce a use within a scenic view open to public view?	☒	☐	☐	☐
c) Change the visual character of an area?	☒	☐	☐	☐
d) Create glare or night lighting, which may affect surrounding areas?	☒	☐	☐	☐
e) Impact unique geological or physical features?	☐	☐	☒	☐
f) Other: _____	☐	☐	☐	☐

Setting. Price Canyon Road is a regional arterial road connecting Pismo Beach to San Luis Obispo and the Arroyo Grande fringe area. From Price Canyon Road, the area can be generally described as having a rural setting with the visible foreground and backdrop consisting of undeveloped lands and agriculture (grazing, vineyards). Portions of the existing oil field (current operation includes 100 producing wells and 40 injector wells) are visible on Price Canyon Road mostly in the Ormonde Road area. The existing vegetation can be described as fairly intact oak woodlands and chaparral habitats. Topography ranges from gently sloping at the valley bottom to very steeply sloping. Overall visual quality on Price Canyon Road between Pismo Beach and Highway 227 ranges from marginal (oil fields) to high (everywhere else). Previous landscaping efforts for oil wells, pads and roads have met with varied success. The visual impacts of the existing well pads were evaluated in the previous environmental documents cited above in the "Background" section.

The railroad, which includes another public vantage, also passes through the existing oil field.

The applicant has prepared a visual simulation for the four most visible newly proposed well pads as seen from Price Canyon Road.

Proposed nighttime lighting is expected to be similar to the current practices. Lighting is mostly limited to portions of the operation that is most active around support facilities. The well field is mostly dark except for temporary lighting needs during new drilling, redrilling and workovers.

Portions of the project are within a 'very high' fire severity rating. In such situations, CalFire strongly encourages substantial vegetation/fuel modification for 100 feet from the structures. This is typically measured from the edge of pad. Retention of individual trees is commonly acceptable, but may require trimming. Fuel modification along access roads is 10 feet from road edge.

Monitoring for condition compliance of previously approved phases has occurred for many years.

Impact. Phase V development proposes 11 new well pads and the expansion of 38 existing other pads. New access roads and ancillary equipment/pipes to these pads will also be necessary, some of which is expected to be visible from Price Canyon Road. The additional visibility of the expanded existing pads will vary depending on the amount of cut and fill slopes created. Several new pads are located on the south side of Price Canyon Road in a relatively pristine area with minimal

A portable drilling rig will be used for any new oil or injection well drilling, redrilling or workovers. The portable rig may be at each well site for up to two weeks. When upright (about 60 feet tall), this drilling rig will be potentially visible from many existing and proposed pads. The long-term drilling schedule will likely be variable depending on demand or economics. The applicant has stated that the historical maximum number of new wells drilled in a year is 37 and the range of annual workovers is 20-30 per year. Therefore, it is expected that at least two portable rigs will be working/installed on any given day throughout the year.

The initial application packet does not include nor currently propose any new landscaping. Some landscaping has been required through previous approvals. The application identifies that up to 1,650 oak trees and 1,200 manzanita could be removed as a result of this expansion.

New access roads and pads are proposed, as well as expansion/widening of existing pads and/or access roads. Some of these newly graded areas will be visible from public vantages. These areas will also be subject to fuel modifications for fire safety as recommended by CalFire. Some utility lines (such as pipe racks/lines and power lines) propose to cross through native vegetation. Visual portions of existing access road to Well Pad #2 may become more visible as: minor grading is needed for sections; tree trimming/removal is necessary for trucks to access site, as well as provide for 10-foot CalFire fuel reduction requirement along access roads.

Mitigation/Action Required. Due to the potentially significant impacts to public views, the following assessment of visual impacts is needed

1. Peer review of the visual simulations is needed to determine the accuracy and adequacy of the work completed. A supplemental viewshed analysis may need to be prepared by qualified persons.
2. The impacts of all project activities visible from Price Canyon and the railroad (e.g., construction, drilling, operations, CalFire fuel modification setback areas). Impacts to “key screening” vegetation and the ability of soil to grow new vegetation needs to be considered. Landscaping should be identified that will do well given the existing conditions, should screening be required. What if any above ground components will be highly visible (e.g., well pumps, tanks, etc.).
3. What impacts will there be from temporary and permanent night lighting? What impacts will result from the proposed cut and fill slopes and what if any difficulties there will be from successfully revegetating cut slopes.
4. Recommendation and discussion of adequate and feasible mitigation measures, as applicable, to ensure that visual resources are adequately protected.

2. AGRICULTURAL RESOURCES *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Convert prime agricultural land, per NRCS soil classification, to non-agricultural use?	☐	☐	☒	☐
b) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?	☐	☐	☒	☐
c) Impair agricultural use of other property or result in conversion to other uses?	☐	☒	☐	☐

2. AGRICULTURAL RESOURCES *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
d) Conflict with existing zoning for agricultural use, or Williamson Act program?	☐	☒	☐	☐
e) Other: _____	☐	☐	☐	☐

Setting. Project Elements. The following area-specific elements relate to the property's importance for agricultural production:

Land Use Category: Agriculture, Rural Lands]

State Classification: Not prime farmland, Farmland of Statewide Importance, Prime Farmland if irrigated and either protected from flooding or not frequently flooded after significant storm events]

Historic/Existing Commercial Crops: Yes – field rotational crops (APN 044-191-005)

In Agricultural Preserve? Yes

Under Williamson Act contract? No, however such is immediately to the west

The soil type(s) and characteristics on the subject property include:

Arnold loamy sand (5 - 15 % slope). This gently to moderately sloping sandy soil is considered moderately drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities. The soil is considered Class IV without irrigation and Class IV when irrigated.

Arnold loamy sand (15 - 50 % slope). This moderately to steeply sloping sandy soil is considered moderately drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Baywood fine sand (15 - 30 % slope). This moderately sloping sandy soil is considered well drained. The soil low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Briones loamy sand (15 - 50 % slope). This moderately to steeply sloping sandy soil is considered moderately drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities, steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Briones- Pismo loamy sands (9 - 30% slope).

Briones. This moderately sloping sandy soil is considered moderately drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities, steep slopes, shallow depth to bedrock. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Pismo. This moderately sloping sandy soil is considered very poorly drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Briones-Tierra complex, (15 - 50% slope).

Briones. This moderately to steeply sloping sandy soil is considered moderately drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities, steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Tierra. This moderately to steeply sloping soil is considered very poorly drained. The soil has moderate erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes, slow percolation. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Corralitos sand (2 - 15 % slope). This gently to moderately sloping, sandy bottom soil is considered well drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities. The soil is considered Class VI without irrigation and Class IV when irrigated.

Cropley clay (0 - 2 % slope). This nearly level clayey soil is considered very poorly drained. The soil has moderate erodibility and high shrink-swell characteristics, as well as having potential septic system constraints due to: slow percolation. The soil is considered Class III without irrigation and Class II when irrigated.

Cropley clay (2 - 9 % slope). This gently sloping clayey soil is considered very poorly drained. The soil has moderate erodibility and high shrink-swell characteristics, as well as having potential septic system constraints due to: slow percolation. The soil is considered Class III without irrigation and Class II when irrigated.

Diablo and Cibo clays (9 - 15 % slope).

Diablo. This gently to moderately sloping clayey soil is considered very poorly drained. The soil has moderate erodibility and high shrink-swell characteristics, as well as having potential septic system constraints due to: slow percolation. The soil is considered Class III without irrigation and Class III when irrigated.

Cibo. This gently to moderately sloping clayey soil is considered very poorly drained. The soil has moderate erodibility and high shrink-swell characteristics, as well as having potential septic system constraints due to: shallow depth to bedrock, slow percolation. The soil is considered Class III without irrigation and Class III when irrigated.

Elder sandy loam (2 - 5 % slope). This gently sloping coarse loamy bottom soil is considered moderately drained. The soil has moderate erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: slight. The soil is considered Class III without irrigation and Class II when irrigated.

Elder sandy loam (5 - 9 % slope). This gently sloping, coarse loamy bottom soil is considered moderately drained. The soil has moderate erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: slight. The soil is considered Class III without irrigation and Class II when irrigated.

Gaviota fine sandy loam (15 - 50 % slope). This moderately to steeply sloping, shallow coarse loamy soil is considered very poorly drained. The soil has high erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Gaviota sandy loam (50 - 75 % slope). This very steeply sloping, shallow coarse loamy soil is considered very poorly drained. The soil has high erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Lopez very shaly clay loam (30 - 75% slope). This steeply to very steeply sloping, shallow gravelly

fine loamy soil is considered very poorly drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Pismo loamy sand (9 - 30 % slope). This moderately sloping shallow sandy soil is considered Very poorly drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Pismo-Rock outcrop complex (30 - 75% slope). This steeply to very steeply sloping shallow sandy soil is considered Very poorly drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: steep slopes, shallow depth to bedrock. The soil is considered Class VII without irrigation and Class is not rated when irrigated.

Pismo-Tierra complex (9 - 15 % slope).

Pismo. This moderately sloping soil is considered very poorly drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: shallow depth to bedrock. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Tierra. This moderately sloping soil is considered very poorly drained. The soil has moderate erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: slow percolation. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Tierra sandy loam (2 - 9 % slope). This gently sloping coarse loamy claypan soil is considered very poorly drained. The soil has moderate erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: slow percolation. The soil is considered Class III without irrigation and Class III when irrigated.

Psamments and Fluvents, wet. This nearly level soil has unrated drainage characteristics. The soil has unrated erodibility and unrated shrink-swell characteristics, as well as having unrated septic system constraints. The soil is considered Class VI without irrigation and Class VI when irrigated.

Xerorthents, Eroded. This steeply to extremely steeply sloping soil has unrated drainage characteristics. The soil has unrated erodibility and unrated shrink-swell characteristics, as well as having unrated septic system constraints. The soil is considered Class VIII without irrigation and Class is not rated when irrigated.

Impact. None of the project site is under Williamson Act contracts. The proposed expansion will have no direct impact on the existing portion of land currently being used for rotational crops. The project expansion is proposed primarily within the existing oil field already developed through previous approvals. The existing vineyards to the south of the project are not expected to be directly impacted from the proposed development. There will be a small increase in the consumption of potable water for the additional workers expected during drilling, maintenance and operation. Phase IV of the project approved a water treatment component which allows the 'produced' water that is pulled from the oil formation to be treated to a tertiary level. This treated water is then delivered to Pismo Creek where it in turn is recharged back into the water source being used by all downstream users. This process provides a net increase of potable water. With the exception of some of the small, flatter alluvial areas adjacent to Pismo Creek, the area within the project's property boundaries has not been used much for agricultural activities. As identified above under the soil descriptions, the area being used for rotational field crops covers all of the Class I/II soils within the project's property boundaries. This area is not proposed to be impacted by the expansion.

Mitigation/Action Required. A referral will need to be sent to the Ag Commissioner's Office to determine if there are additional agricultural concerns above what has been identified in the impact

section. If any significant agricultural impacts are identified they shall be analyzed with measures proposed to reduce impacts to less than significant levels, if possible. The agricultural resource analysis should also include, but not necessarily be limited to, the following:

1. Consultation with the County Agricultural Commissioner's Office, County Planning & Building (Ag Preserve Program), and the California Department of Food and Agriculture, as applicable.
2. A description of the existing and historical agricultural setting, uses and practices.
3. A description of adjacent agricultural uses.
4. A description of the agricultural suitability of the site, including soil types, soil capabilities, and the productivity of agricultural soils both for irrigated and non irrigated uses.
5. Identification and description of current and potential future water sources suitable for agricultural uses (see Water Resources).
6. Evaluation of the potential adverse impacts to agricultural capability resulting from the project.
7. Evaluation of the potential adverse impacts to the agricultural capability of adjacent or nearby lands currently enrolled in the Agricultural Preserve Program.
8. Recommendation and discussion of adequate and feasible mitigation measures, if any, to ensure that agricultural resources are adequately protected.

3. AIR QUALITY *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by County Air Pollution Control District?	☒	☐	☐	☐
b) Expose any sensitive receptor to substantial air pollutant concentrations?	☒	☐	☐	☐
c) Create or subject individuals to objectionable odors?	☒	☐	☐	☐
d) Be inconsistent with the District's Clean Air Plan?	☒	☐	☐	☐
e) Result in a cumulatively considerable net increase of any criteria pollutant either considered in non-attainment under applicable state or federal ambient air quality standards that are due to increased energy use or traffic generation, or intensified land use change?	☒	☐	☐	☐
GREENHOUSE GASES				
f) ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***	☒	☐	☐	☐

3. AIR QUALITY *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐
h) Other: _____	☐	☐	☐	☐

Setting. The Air Pollution Control District (APCD) has developed and updated their CEQA Air Quality Handbook (2012) to help evaluate project specific impacts and determine if air quality mitigation measures are needed, or if potentially significant impacts could result. However, this type of development is not specifically discussed in the Handbook.

To evaluate long-term emissions, cumulative effects, and establish countywide programs to reach acceptable air quality levels, a Clean Air Plan has been adopted (prepared by APCD).

The current operation includes up to 100 active producing oil wells and up to 40 active water injector wells. The project currently has APCD permits to operate these wells. 7 trucks are currently used to haul 1,000 barrels of oil off the site daily. Existing permits allow up to 5,000 bpd

The following provides a summary of historic and existing air quality conditions that relate to the project's potential impacts to or from existing or projected air quality.

Non-Attainment. The County is within the South Central Coast Air Basin, which is currently considered by the state as being in "non-attainment" (exceeding acceptable thresholds) for particulate matter (PM10 , or fugitive dust) and ozone. The Air Pollution Control District (APCD) estimates that automobiles currently generate about 40% of the pollutants responsible for ozone formation. Nitrous oxides (NOx) and reactive organic gasses (ROG) pollutants (vehicle emission components) are common contributors towards this chemical transformation into ozone. Dust, or particulate matter less than ten microns (PM10), that becomes airborne and finds its way into the lower atmosphere, can act as the catalyst in this chemical transformation to harmful ozone.

Local Air Quality. The project is nearest to the San Luis Obispo Air Quality Monitoring Stations. Based on the latest air monitoring station information, the trend in air quality in the general area is considered unchanged for PM10 and ozone, and below thresholds set for the State and Federal levels. This station is a some distance from the project and is considered limited in value.

Referral. As required by Section 22.10.030 of the County's LUO, the proposed project will be referred to the County of San Luis Obispo Air Pollution Control District (APCD) for review and determination of any air quality impacts potentially resulting during both the project's construction and operational phases. APCD has been working with the applicant on the previously approved phases.

Developmental Burning. On February 5, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County; however, in certain situations where no technically feasible alternative is available, limited burning under restrictions may be allowed. Unregulated burning would result in a potentially significant air quality impact.

Odors. As specified in the County's LUO Section 22.10.030, any non-agricultural land use conducted in, or within one-half mile of an urban or village reserve line shall be operated so as not to emit matter causing noxious odors which are perceptible at the points of determination identified in the following table:

Land Use Category where Odor-Producing Use is Located	Point of Determination
Residential, Office and Professional, Recreation, Commercial	At or beyond any lot line of the lot containing the use
Industrial	At or beyond the boundary of the Industrial category

Given that this project is within the Agriculture and Rural Lands categories, the above provisions do not apply. Also, the closest project element (surface reservoir is just beyond one-half mile from the Los Ranchos/Edna village reserve line.

APCD Permitting. For any generators of 50 hp or greater, the project would be subject to APCD Engineering Permit and Controls.

Greenhouse Gas (GHG) Emissions are said to result in an increase in the earth's average surface temperature. This is commonly referred to as global warming. The rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system. This is also known as climate change. These changes are now thought to be broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels.

The passage of AB32, the California Global Warming Solutions Act (2006), recognized the need to reduce GHG emissions and set the greenhouse gas emissions reduction goal for the State of California into law. The law required that by 2020, State emissions must be reduced to 1990 levels. This is to be accomplished by reducing greenhouse gas emissions from significant sources via regulation, market mechanisms, and other actions. Subsequent legislation (e.g., SB97-Greenhouse Gas Emissions bill) directed the California Air Resources Board (CARB) to develop statewide thresholds.

In March 2012, the San Luis Obispo County Air Pollution Control District (APCD) approved thresholds for GHG emission impacts, and these thresholds have been incorporated into the APCD's CEQA Air Quality Handbook. APCD determined that a tiered process for residential / commercial land use projects was the most appropriate and effective approach for assessing the GHG emission impacts. The tiered approach includes three methods, any of which can be used for any given project:

1. Qualitative GHG Reduction Strategies (e.g. Climate Action Plans): A qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals; or,
2. Bright-Line Threshold: Numerical value to determine the significance of a project's annual GHG emissions; or,
3. Efficiency-Based Threshold: Assesses the GHG impacts of a project on an emissions per capita basis.

For the proposed 'industrial' project the Bright-Line Threshold of 10,000 Metric Tons CO2/year (MT CO2e/yr) will be the most applicable threshold.

It should be noted that projects generating less than the above mentioned threshold will also participate in emission reductions because air emissions, including GHGs, are under the purview of the California Air Resources Board (or other regulatory agencies) and will be "regulated" either by CARB, the Federal Government, or other entities. For example, new vehicles will be subject to increased fuel economy standards and emission reductions, large and small appliances will be subject to more strict emissions standards, and energy delivered to consumers will increasingly come from renewable sources. Other programs that are intended to reduce the overall GHG emissions include Low Carbon Fuel Standards, Renewable Portfolio standards and the Clean Car standards. As a result, even the emissions that result from projects that produce fewer emissions than the threshold will be subject to emission reductions.

Under CEQA, an individual project's GHG emissions will generally not result in direct significant

impacts. This is because the climate change issue is global in nature. However, an individual project could be found to contribute to a potentially significant cumulative impact. Projects that have GHG emissions above the noted thresholds may be considered cumulatively considerable and require mitigation.

Valley Fever. Coccidioidomycosis (also known as Valley Fever, San Joaquin Valley Fever, California valley fever, desert fever, and coccidiomycosis or 'cocci') is a fungal disease caused by *Coccidioides immitis* or *C. posadasii*. It is endemic in certain parts of Arizona, California, Nevada, New Mexico, Texas, Utah and northwestern Mexico.

C. immitis resides in the soil in certain parts of the southwestern United States, northern Mexico, and parts of Central and South America. It is dormant during long dry spells, then develops as a mold with long filaments that break off into airborne spores when the rains come. The spores, known as arthroconidia, are swept into the air by disruption of the soil, such as during construction or farming.

Infection is caused by inhalation of the particles. The disease is not transmitted from person to person. *C. immitis* is a dimorphic saprophytic organism that grows as a mycelium in the soil and produces a spherule form in the host organism.

The disease is usually mild, with flu-like symptoms and rashes, and the Mayo Clinic estimates that half the population in some affected areas have suffered from the disease. On occasion, those particularly susceptible, including pregnant women, people with weakened immune systems, and those of Asian, Hispanic and African descent, may develop a serious or even fatal illness from valley fever. Serious complications include severe pneumonia, lung nodules, and disseminated disease, where the fungus spreads throughout the body. The disseminated form of valley fever can devastate the body, causing skin ulcers and abscesses to bone lesions, severe joint pain, heart inflammation, urinary tract problems, meningitis, and death.

It has been known to infect humans, dogs, cattle, and livestock, among other mammals.

The San Luis Obispo County Health Department conducted a 2007 study due to a Valley Fever outbreak in the northern part of the County. The report identifies construction crews involved with moving previously undisturbed soils in inland areas, especially in the Fall, are at a higher risk of coming in contact with this airborne fungus. The report includes a number of measures to reduce the potential for this organism from infecting humans, with 1) the use of dust control measures and 2) making sure workers are informed of the symptoms to provide for immediate medical attention if contracted, as the most effective means to avoid significant problems.

Impact. The project will result in additional air pollutants relating to: additional grading for pads, access roads, drilling and trenching; vehicle/equipment emissions during construction, drilling, maintenance and operations; natural gas production/processing during oil extraction. The applicant has not prepared a detailed air quality analysis or health risk assessment. Up to 2,850 oaks and manzanita will be removed

Historically, as observed from Price Canyon Road, noticeable odors occur on a fairly regular basis at the facility. Additional information has been requested from the applicant to help identify the source(s) of these odors and if there are any additional efforts to reduce these odors.

As cases of Valley Fever have been documented countywide, potential impacts to workers during grading activities are possible and should be evaluated further.

Mitigation/Action Required. Due to the project's potential impacts to air quality and that San Luis Obispo County has been designated non-attainment for PM10 (fine particulate) and ozone, additional analysis of air quality impacts shall be accomplished by a qualified air quality specialist competent in preparation and/or peer review of AQ modeling work (if completed by others) and shall include, but not necessarily be limited to, the following:

1. Consultation with the Air Pollution Control District, California Air Resources Board, County

Public Health Department and Environmental Health Division, as applicable.

2. A description of the existing air quality in the project area, including:
   a. Discussion of applicable State and Federal air quality standards.
   b. Local climate and air pollution meteorology.
   c. Local trends and patterns of air pollutant concentrations including air quality monitoring data from local monitoring stations.
3. Discussion of State and Federal attainment status and current air quality planning efforts within the County.
4. Discussion of other potentially hazardous air-born contaminants (e.g., Valley Fever, H2S, etc.), including any existing thresholds of significance. APCD will be contacted to help determine if any specific analysis or modeling is warranted.
5. Discussion of County air quality policies relative to development, and applying air quality thresholds, such as what is cited in the County's adopted Clean Air Plan or the latest APCD Handbook.
6. All surrounding sensitive receptors shall be identified.
7. Conduct and/or provide peer review (if prepared by the applicant) of an Air Quality Emissions Modeling (i.e., CALEEMOD) for the proposed expansion. This effort would include, but not necessarily be limited to: inclusion of all emission-generating aspects; ensuring that: proper assumptions are used; and the scenario evaluated considers a reasonable worst case situation for each phase (exploration, testing, production [including any supplemental drilling]) of development. Any information deficiencies shall be identified early to convey to AQ modeler; subsequent peer review of this additional work would be expected, if such revisions determined necessary. Such modeling efforts would need to estimate GHG impacts.
8. Based on this analysis, determine if any APCD thresholds will be exceeded. If mitigation measures are necessary, identify feasible measures and quantify associated reductions. This shall include consideration of measures proposed by the applicant. Evaluate effectiveness of project proposed measures (e.g., use of road gravel for dust control, etc.), and if any supplemental measures are needed.

4. BIOLOGICAL RESOURCES

Will the project:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Result in a loss of unique or special status species* or their habitats?	☒	☐	☐	☐
b) Reduce the extent, diversity or quality of native or other important vegetation?	☒	☐	☐	☐
c) Impact wetland or riparian habitat?	☒	☐	☐	☐
d) Interfere with the movement of resident or migratory fish or wildlife species, or factors, which could hinder the normal activities of wildlife?	☒	☐	☐	☐

4. BIOLOGICAL RESOURCES *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
e) Conflict with any regional plans or policies to protect sensitive species, or regulations of the California Department of Fish & Game or U.S. Fish & Wildlife Service?	☐	☐	☒	☐
f) Other: _____	☐	☐	☐	☐

* **Species – as defined in Section15380 of the CEQA Guidelines, which includes all plant and wildlife species that fall under the category of rare, threatened or endangered, as described in this section.**

Setting. **Project Elements**. The following are existing elements on or near the proposed project relating to potential biological concerns:

On-site Vegetation: coast live oak woodlands, chaparral, grassland, riparian, wetland

Name and distance from blue line creek(s): Pismo Creek

Habitat(s): Maritime chaparral, oak woodlands

Site's tree canopy coverage: Approximately 34-75%.

The Natural Diversity Database (or other biological references) identified the following species potentially existing within approximately one mile of the proposed project:

Black-flowered figwort (Scrophularia atrata) List 1B

Black-flowered figwort *(Scrophularia atrata)* has been found about 0.9 mile to the northwest. This perennial herb is generally found growing on calcareous or diatomaceous soils in a closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, or riparian scrub areas at elevations between 10 and 500 meters (30 to 1,640 feet). It is a California endemic which has a blooming period of April-June. Black-flowered figwort is considered rare by the CNPS (List 1B, RED 2-2-3).

Brewer's spineflower (Chorizanthe breweri) List 1B

Brewer's spineflower *(Chorizanthe breweri)* has been found within the project site. This annual herb is a member of the buckwheat family, and is endemic to San Luis Obispo County. It is generally found growing on serpentinite, rock or gravely substrates within closed-cone coniferous forest, chaparral, cismontane woodland, or coastal scrub plant communities at elevations between 45 and 800 meters (150 to 2,625 feet). It has a blooming period from May through August. Brewer's spineflower is considered rare by the CNPS (List 1B, RED 3-1-3).

Indian Knob mountainbalm (Eriodictyon altissimum) FE, SE, List 1B

Indian Knob mountainbalm *(Eriodictyon altissimum)* has been found about 0.6 mile to the west. This evergreen shrub is found generally on sandstone soils in chaparral (maritime), cismontane woodland and coastal scrub areas at elevations between 80 and 270 meters (260 to 890 feet). The blooming period is March-June. Indian Knob mountainbalm is considered Federal and State endangered and extremely rare by CNPS (List 1B, RED 3-3-3).

Mesa horkelia (Horkelia cuneata spp. puberula) List 1B

Mesa horkelia (*Horkelia cuneata* spp. *puberula*) has been found about 0.3 mile to the west. This perennial herb is generally found on sandy or gravelly soils in chaparral, cismontane woodland, and coastal scrub areas between the 70 and 810-meter elevation (230 to 2,660

feet). It has a blooming period of February-September. Mesa horkelia is considered rare by CNPS (List 1B, RED 2-3-3).

Pismo clarkia (Clarkia speciosa ssp. immaculate) FE, SR, List 1B

Pismo clarkia *(Clarkia speciosa* ssp*. immaculate)* has been found within the project site. This annual herb occurs on low, sandy hills (up to the 185 meter (600-foot) elevation) from Pismo to Edna Valley. Pismo clarkia populations are found in valley and foothill grasslands, and in the margins between chaparral and oak woodland communities near the coast. This species is listed as Federally endangered, State rare, and extremely rare by CNPS (List 1B, RED 3-3-3).

San Luis mariposa lily (Calochortus obispoensis) List 1B

San Luis mariposa lily *(Calochortus obispoensis)* has been found about 0.6 mile to the southeast. This perennial herb is endemic to San Luis Obispo County, ranging from Cuesta Pass, south to Arroyo Grande. The San Luis mariposa lily is found on dry, serpentine soils in chaparral, coastal scrub, grassland, and freshwater seep habitats between the 75 and 730-meter elevations (250 to 2,400 feet). This species blooms from May to July. The California Native Plant Society (CNPS) considers this species rare (List 1B, RED 2-2-3).

San Luis Obispo County lupine (Lupinus ludovicianus) List 1B (RED 3-2-3)

San Luis Obispo County lupine *(Lupinus ludovicianus)* has been found within the project site. This perennial herb is generally found on sandstone or sandy soils in chaparral and cismontane woodland habitats between the 50 and 525-meter elevations (165 to 1,725 feet). The species generally blooms from April through July. The lupine is the official flower of San Luis Obispo County. The plant is primarily threatened by grazing and trampling. The CNPS considers this plant rare (List 1B, RED 3-2-3).

Santa Margarita manzanita (Arctostaphylos pilosula ssp. pilosula) List 1B

Santa Margarita manzanita (*Arctostaphylos pilosula* ssp. *pilosula*) has been found within the project site. This evergreen shrub is found on shale soils in closed-cone coniferous forest, chaparral; and cismontane woodland areas between the 170 and 1,100-meter elevations (555 to 3,600 feet). The typical blooming period is December-March. Santa Margarita manzanita is considered rare by CNPS (List 1B, RED 3-2-3).

Wildlife

American badger *(Taxidea taxus)*

American badger *(Taxidea taxus)* have been found within the project site. In California, Badgers range throughout the state except for the humid coastal forests of northwestern California (Del Norte and Humboldt Co). Badger populations have declined drastically in California within the last century (Grinnell et al., 1937; Longhurst, 1940), where they now survive only in low numbers in peripheral parts of the central valley and adjacent lowlands to the west in eastern Monterey, Mendocino, San Benito and San Luis Obispo counties. In California, Badgers occupy a diversity of habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are preferred. Badgers prey primarily on burrowing rodents such as Gophers (*Thomomys*), Ground Squirrels (*Spermophilus, Ammospermophilus*), Marmots (*Marmota*), and Kangaroo Rats (*Dipodomys*). They are predatory specialists on these rodents, although they will eat a variety of other animals, including mice, Woodrats, reptiles, birds and their eggs, bees and other insects, etc.

Deliberate killing probably has been a major factor in the decline of Badger populations with many people regarding them as detrimental to their interests. Cultivation is adverse to Badgers, as they do not survive on cultivated land. Agricultural and urban developments have been the primary causes of decline and extirpation of populations of Badgers in California. Rodent and predator

poisoning pose double threats through direct and secondary poisoning of Badgers and elimination of the food Badgers are dependent upon. Shooting and trapping of Badgers for animal "control" is another source of mortality.

South/Central Coast Steelhead Trout *(Oncorhynchus mykiss)* FT, CSC

South/Central Coast Steelhead Trout *(Oncorhynchus mykiss)* has been found within the project site (Pismo Creek). South/Central Coast Steelhead Trout is considered federally threatened and a California species of Special Concern. This species require cool, deep pools for holding through the summer, prior to spawning in the winter. Generally they are found in shallow areas, with cobble or boulder bottoms at the tails of pools. This species is threatened by water quality degradation (e.g., siltation, urban and agricultural pollutants), loss of riparian vegetation, and low instream flows resulting from water diversion, ground water pumping and periodic drought.

Southwestern pond turtle *(Emys (or Clemmys) marmorata pallida*), CSC, FSC

Southwestern pond turtle *(Emys (or Clemmys) marmorata pallida)* has been found within the project site. Southwestern pond turtle is a federal and California Species of Special Concern. This is an aquatic turtle that uses upland habitat seasonally. They occur in ponds, streams, lakes, ditches, and marshes. The species prefers slow-water aquatic habitat with available basking sites nearby. Hatchlings require shallow water habitat with relatively dense submergent vegetation for foraging.

Tidewater goby *(Eucyclogobius newberryi)* FE, CSC

Tidewater goby *(Eucyclogobius newberryi)* has been found about 0.9 mile to the south. They are considered federally endangered and a California Species of Special Concern. This species is found in brackish water habitats along the California coast. Microhabitats include shallow lagoons and lower stream reaches. The goby needs fairly still but not stagnant water with high oxygen levels. Suitable habitat within these streams range from the mouths to approximately 1.5 to 2.0 miles upstream. Tidewater goby is threatened by various factors including water quality degradation and low instream flows caused by water diversions and periodic drought.

Habitats

Central Maritime Chaparral generally occurs in areas exposed directly to coastal winds, such as on northwest and southwest facing slopes along the coast, and are established primarily on well-drained soils. Various species of manzanita (*Arctostaphylos* spp.) generally dominate this sensitive plant community.

Oak Woodlands. On January 1, 2005, the State of California enacted an *Oak Woodland Conservation bill (SB1334)* that amended the Public Resource Code to include greater oak woodland protection measures from new discretionary development (California Environmental Quality Act, Sec 21083.4). The more significant changes include: defining the size of oak tree, requiring a fee or conservation easement to address at least one half of the impacts, requiring seven years of monitoring for replanting efforts.

As a part of the CEQA process relating to oak tree impacts, the County makes efforts to minimize impacts to existing oak trees. When that is not possible the County typically applies the following replacement ratios for “impacted” and “removed” oak trees:

“removed” trees – replace with four in-kind seedlings;

“impacted” trees - replace with two in-kind seedlings.

Pismo Creek – Water Quality. The project proposes to disturb more than one acre. Therefore, prior to work beginning, the project will be required to prepare and implement a *Stormwater Pollution Prevention Plan* (SWPPP) that has been approved by the Regional Water Quality Control Board or County. This Plan will include measures to reduce potential sedimentation, erosion and drainage

impacts to existing downstream water sources.

Fire Safety – Fuel modification of Native Vegetation. The project is within a “high” or “very high” fire severity zone as defined by CAL FIRE. In addition to the minimum 30-foot clearance of vegetation around proposed structures, an additional 70 feet beyond (100 feet total) the edge of each new structure (CalFire has previously defined this as the edge of the well pad) will require substantial fuel modification to reduce fire hazards. Ten feet along each side of each access road will also require heavy fuel modification. A 14-foot vertical clearance is also needed along any access road.

The federal **Migratory Bird Treaty Act** (16 U.S.C., Sec. 703, Supp. I, 1989), prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of Prey are protected in California under the State Fish and Game Code, Section 3503.5, 1992). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. This approach applies to red-tailed hawks, American kestrels, burrowing owls, and other birds of prey. Project impacts to these species would not be considered "significant" unless they are known or have a high potential to nest on the site or rely on it for primary foraging.

Also, the federal **Bald Eagle Protection Act**, prohibits persons within the United States (or places subject to U.S. jurisdiction) from "possessing, selling, purchasing, offering to sell, transporting, exporting or importing any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof."

Impact. As proposed, the project will result in the following direct impacts to sensitive species:

- Oak impacts – The proposed removal of up to 1,650 oaks. Additional information has been requested to determine if this number has factored in CalFire fuel modification requirements. Given the proposed number of trees removed/ impacted this is expected to trigger oak woodland provisions under CEQA.
- Due to the oaks and manzanita proposed for removal, and the establishment of the proposed activities, potential impacts could occur to nesting or roosting trees that may currently support migratory birds or birds of prey;
- Without adequate controls, erosion and sedimentation could adversely impact down gradient surface waters and associated wildlife; SWPPP requirements will need to be evaluated to determine their effectiveness and potential impact to steelhead (and other sensitive aquatic species) and downgradient spawning areas within Pismo Creek.
- Spillage or leakage of crude oil and related toxic constituents could adversely impact sensitive vegetation near leaks or spills, as well as to down gradient surface waters and associated wildlife;

Impacts to other sensitive species were identified as follows:

- Other wildlife (American badger, California red-legged frog) may be found during exploration/ testing, maintenance and operation;
- New or replacement pipeline crossings are proposed over Pismo Creek. Additional information has been requested of the applicant to describe the potential impacts adjacent to and within Pismo Creek;

- ❖ Drilling and Operations may result in up to two portable drill rigs on-site working extended hours or sometimes 24 hours day over a 10-year period, which may be potentially disruptive to surrounding wildlife for extended periods.

Mitigation/Action Required. Due to the project's potential impacts to biological resources, additional analysis of biological resource impacts shall be accomplished by a qualified biologist to peer review biological reports (completed by others) and applicant-proposed mitigation measures. This effort shall also include, but not necessarily be limited to, the following:

1. Consultation with the State Department of Fish and Game, the United States Fish and Wildlife Service and/or National Marine Fisheries Service.
2. Consultation with the California Native Plant Society, the Audubon Society, and other conservation organizations, as appropriate.
3. Identification of all rare, threatened and/or endangered plant and wildlife species on site.
4. Identification of all rare, threatened and/or endangered plant and wildlife species off site which could potentially be affected by the proposed project.
5. Identification of other sensitive, unique or important plant and wildlife species and communities of the project area.
6. The EIR consultant shall peer review (previous monitoring biological reports) or prepare mapping that illustrates the locations of the following (if any):
   a. Location of individuals and groups of rare, threatened, and/or endangered plant species.
   b. Habitat for rare, threatened and/or endangered plant and animal species.
   c. Wetlands and riparian areas.
   d. Other areas of sensitive, unique or important biological resources.
   e. Areas of invasive plants potentially harmful to sensitive plants and/or wildlife.
7. Identification of short term and long term impacts on rare, threatened, and/or endangered species and species habitat.
8. Identification of cumulative impacts on the area's ecosystem, which could result from the project.
9. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential adverse biological impacts to less than significant levels. This discussion will evaluate the success/adequacy of efforts completed subsequent to previous Phase approvals.

5. CULTURAL RESOURCES *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Disturb archaeological resources?	☐	☒	☐	☐
b) Disturb historical resources?	☐	☐	☒	☐
c) Disturb paleontological resources?	☐	☐	☒	☐

5. CULTURAL RESOURCES

Will the project:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
d) Other: _____	☐	☐	☐	☐

Setting. The project is located in an area historically occupied by the Obispeno Chumash. No historic structures are present and no paleontological resources are known to exist in the area.

Pismo Creek is a perennial source of water. 'Pismu' means 'tar' in Obispeno Chumash, and is likely the origin of name Pismo used in the area. Surface oil and tar seeps existed in the area prior to oil development. Thick tars were applied by the Chumash to seal their canoes and make them ocean worthy. Phase 1 (surface) surveys have been conducted for previous phases on the subject property. As a result of these surveys, archeological resources were identified in several locations within the general project boundaries. These have been previously identified for protection. Additional information will be forthcoming regarding the proposed expansion areas. No historic resources were found from the previous surveys and no historic resources are expected to be impacted from the proposed expansion.

Some potential exists for paleontological resources to be present in this type of geological formation.

Impact. The project proposes the creation of new oil well pads and expansion of other pads throughout the existing oil field. Additional access roads and transport/utility lines will be installed to support this expansion. Some development is within relatively close proximity to known or potential resources. Potential pre-historic resources are in the nearby vicinity. Additional information is needed to determine the potential presence of resources within the expansion areas. Given the flexibility of locating expansion components, if additional resources are encountered, there appears to be ample room to adjust project design to avoid such resources.

As no paleontological resources have been encountered for the first four phases, impacts are considered to be less than significant of finding paleontological resources within the Phase V expansion areas.

Mitigation/Action Required. Due to the potentially significant impacts to cultural resources, additional analysis may be needed by a County-qualified archaeologist and if necessary include, but not be limited to, the following:

1. As applicable, consultation with the State Historic Resources Commission and the Office of Historic Preservation (SHPO) and/or determine if project is listed on the California or National Registers of Historic Places.
2. Discuss existing County policies and regulations, as applicable.
3. If report on expansion is already done, EIR consultant would conduct a peer review by qualified individual of the technical report(s) prepared. This shall include, but is not limited to, review for adequacy and accuracy of the following aspects: proper survey methodology, adequacy of survey area size, adequacy of proposed mitigation measures, etc. Deficiencies may be corrected by the Applicant's expert (requiring second round of peer review) or the consultant (work scope to be developed and then reviewed and approved by County.)
4. Discussion of the potential or known pre-historic importance of the area. This shall include a discussion of the physical setting as it relates to potential habitation or use of the area by Native Americans.
5. A review of archaeological records to identify known archaeological sites in the surrounding area.
6. (*If no peer review*) Prepare a surface survey (Phase 1) for the project's expansion area, and related elements, to determine the potential presence of pre-historic resources. Describe methodology to be employed.

7. Recommendation and discussion of adequate and feasible mitigation measures, if any, to ensure that known and unknown archaeological resources are adequately protected. Existing regulations shall be identified as such. If the preparation of future plans are recommended, adequate performance standards shall be included in the measure to ensure success.

8. The location and detailed descriptions of pre-historic archaeological resources shall be contained in an appendix to be published under separate cover and clearly marked "Confidential, Not For Public Review". All maps shall be placed in the appendix. Any mapped area shall be referred to as an 'Environmentally Sensitive Area'.

6. GEOLOGY AND SOILS *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards?	☐	☒	☐	☐
b) Be within a California Geological Survey "Alquist-Priolo" Earthquake Fault Zone", or other known fault zones*?	☐	☐	☐	☒
c) Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill?	☐	☒	☐	☐
d) Include structures located on expansive soils?	☐	☐	☒	☐
e) Be inconsistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards?	☐	☒	☐	☐
f) Preclude the future extraction of valuable mineral resources?	☐	☐	☒	☐
g) Other: _____	☐	☐	☐	☐

* **Per Division of Mines and Geology Special Publication #42**

Setting. The following relates to the project's geologic aspects or conditions:

Topography: Nearly level to very steeply sloping

Within County's Geologic Study Area?: No

Landslide Risk Potential: Low to high

Liquefaction Potential: Low to moderate

Nearby potentially active faults?: Yes - Trace "B" of Los Osos Fault Distance? 1/4 mile

Area known to contain serpentine or ultramafic rock or soils?: No

Shrink/Swell potential of soil: Variable

Other notable geologic features? None

Portions of the project boundaries are within a 'high' landslide area, and most development over such areas is subject to the preparation of a geological report per the County's Land Use Ordinance [LUO section 22.14.070 (c)], to evaluate the area's geological stability.

Regulatory Policies. In addition to the Uniform Building Code, the County has two additional documents providing guidance for new development in areas with soil or geological challenges, which are the County's Safety Element and Land Use Ordinance. For projects over an acre in disturbance, Regional Water Quality Control Board requires that a Storm Water Pollution Prevention Plan be prepared to address surface water quality.

With regards to the County's Safety Element, it includes the following goal: *"Minimize the potential for loss of life and property resulting from geologic and seismic hazards"*. This Element also includes policies and standards intended on achieving this goal.

The County's Land Use Ordinance includes provisions to address geological problem areas, drainage, and sedimentation and erosion control.

The County's LUO and Framework for Planning recognize this area for its oil extraction capabilities through the Energy and Extractive Resource Area (EX) overlay and Ordinance provisions for Petroleum Resource Development (Sec. 22.34).

The California Department of Conservation, Division of Oil Gas and Geothermal Resources (DOGGR) has the responsibility to ensure oil resources are protected and then removed efficiently and safely. Under the California Code of Regulations, Title 14, Division 2, Chapter 2 explains their responsibilities under CEQA. As a part of their regulatory responsibility they will require the applicant to complete and execute an oil spill contingency plan. Other areas of responsibility includes 1) proper well casing to insure there is no contamination to soil and aquifers between the oil reservoir (usually well below any potable aquifers) and the surface of the soil; 2) proper plugging and abandoning when well production is terminated; 3) when injection proposed to insure proper methods are being applied; 4) new drilling using proper methods; 5) blowout prevention; and 6) subsidence detection and abatement.

The County of Santa Barbara has developed and updated a detailed program addressing oil well drilling, operation and closure within its county borders. As the SLO County's regulations appear limited on this subject, other Counties' regulations, such as Santa Barbara's, should be compared to determine what, if any, additional measures should be considered.

Grading of one or more acres

Clean Water Act. The Clean Water Act has established a regulatory system for the management of storm water discharges from construction, industrial and municipal sources. The California State Water Resources Control Board (SWRCB) has adopted a National Pollutant Discharge Elimination System (NPDES) Storm Water General Permit that requires the implementation of a Storm Water Pollution Prevention Plan (SWPPP) for discharges regulated under the SWRCB program. Currently, construction sites of one acre and greater may need to prepare and implement a SWPPP which focuses on controlling storm water runoff. Municipal and industrial sources are also regulated under separate NPDES general permits. The Regional Water Quality Control Board and County are the local extensions of the SWRCB, who currently monitors these SWPPPs.

Sedimentation and Erosion Control

Sedimentation and Erosion. Erosion of graded areas and discharge of sediment down gradient will likely result if adequate temporary and permanent measures are not taken before, during and after

vegetation removal and grading. If not properly mitigated, these impacts both on the project site and within surrounding areas may be significant.

It is expected that the applicant will need to prepare a sedimentation and erosion control plan per County Land Use Ordinance [(Inland), Sec. 22.52.090] and incorporate measures into the project to minimize sedimentation and erosion. The plan will need to be prepared by a registered civil engineer and address the following to minimize temporary and long-term sedimentation and erosion: slope surface stabilization, erosion and sedimentation control devices and final erosion control measures.

Impact. As proposed, the project will expand existing pads and construct new ones. Additional transport and utility lines, along with widened or new access roads will need to go to each of these pads. Pismo Creek will be impacted with a new and replacement pipe crossing. Portions of these components will be within areas designated as having 'high' landslide potential. Additional information will be needed before a conclusion can be reached on the stability of the area and if any measures are needed to address the 'high' landslide potential. The new wells will be drilled into existing formations with existing wells. Should groundwater be encountered during drilling, proper DOGGR protocols will need to be followed to insure that there is no well-related contamination to any water source (groundwater is not expected to be encountered).

Expansion of existing pads and the creation of new pads and access roads will increase the potential for sedimentation and erosion impacts. Standard measures are expected to minimize such impacts. Due to the proximity of the creek and that it supports sensitive biological resources, the adequacy of standard measures will need to be discussed.

Above ground spills and leaks onto the soil could occur during drilling and operation, and such impacts will need to be evaluated. Cutting/lubricating muds used during drilling are typically placed in containers after use and then either reprocessed for reuse or disposed at an approved facility. All production water extracted during testing will be either reinjected or diverted to the water treatment plant.

Previous Phase IV approved the installation of a water quality treatment system to clean produced water to tertiary standards and release to the surface. The proposed expansion would use this system (once installed).

Produced natural gasses would be handled similarly as they have been under the existing operation of either diverting to the cogeneration plant to produce power or reinjected back into the oil formation.

As this formation is relatively close to the surface, potential impacts increase to nearby potable groundwater tables. Analysis will need to include a discussion of these relationships, which would include a peer review of any geologic reports prepared for the previous phases. New analysis may be needed for any new oil reserve areas to be explored not previously analyzed.

Certain project components are proposed within the 100-year flood

Mitigation/Conclusion. Implementation of the previously-referenced sedimentation and erosion control plan, drainage plan and SWPPP should reduce sediment and drainage impacts to less than significant levels. Plans/ documents required by DOGGR are intended to address the following geologically-related issues: proper well casing, proper closure of any abandoned mines, proper re-injection, and subsidence detection and abatement. It is expected that Environmental Health will also be requiring additional documents relating to the above issues. RWQCB and CDFG may also include measures to address potential surface spills and soil contamination.

Due to the complexity of multi-agency jurisdiction and potential for numerous agency permits, a registered engineer familiar with the regulations associated with oil well development shall evaluate the existing regulations, their implementation and effectiveness and determine if additional or revised measures are appropriate, including construction and operational monitoring.

The analysis should include, but not be limited to, the following:

1. Consultation with the County Public Works Department, the United States Natural Resource Conservation Service, CA Department of Oil, Gas and Geothermal Resources, Regional Water Quality Control Board, Environmental Health Services and the CA Department of Fish and Game.
2. Identification and mapping of significant drainage courses and watersheds.
3. Identification and mapping of all areas within the project boundaries that currently experience drainage and/or flooding conditions.
4. Identification and mapping of all areas that could potentially be adversely affected by drainage, erosion, or sedimentation impacts resulting from the development the proposed project.
5. Evaluate existing regulations from all jurisdictions with permitting authority to determine where there is regulation overlap (that can be potentially eliminated) as well as if there are gaps that need to be addressed at the various stages of development.
6. Evaluate existing county ordinances on oil well development and compare with other similar counties having detailed oil well development programs (e.g., Santa Barbara, etc.) to determine if additional measures are appropriate.
7. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential adverse geological and soil impacts.

7. HAZARDS & HAZARDOUS MATERIALS - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Gov't Code 65962.5 ("Cortese List"), and result in an adverse public health condition?	☐	☐	☐	☒
e) Impair implementation or physically interfere with an adopted emergency response or evacuation plan?	☐	☐	☒	☐

7. HAZARDS & HAZARDOUS MATERIALS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
f) If within the Airport Review designation, or near a private airstrip, result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Increase fire hazard risk or expose people or structures to high wildland fire hazard conditions?	☐	☒	☐	☐
f) Other: _____	☐	☐	☐	☐

Federal Laws/Regulations

Federal Water Pollution Control Act of 1972 (Clean Water Act). The Clean Water Act governs the control of water pollution in the United States. This Act includes the National Pollutant Discharge Elimination System (NPDES) program, which requires that permits be obtained for point discharges of wastewater. This Act also requires that storm water discharges be permitted, monitored, and controlled for public and private entities.

Resource Control and Recovery Act of 1974 (RCRA). RCRA was enacted as the first step in the regulation of the potential health and environmental problems associated with solid hazardous and non-hazardous waste disposal. RCRA, and the formation of the U.S. EPA to implement the RCRA, provide the framework for national hazardous waste management, including tracking hazardous wastes from point of origin to ultimate disposal.

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Under CERCLA, owners and operators of real estate where there is hazardous substances contamination may be held strictly liable for the costs of cleaning up contamination found on their property. No evidence linking the owner/operator with the placement of the hazardous substances on the property is required. CERCLA, also known as Superfund, established a fund for the assessment and remediation of the worst hazardous waste sites in the nation. Exceptions are provided for crude oil wastes that are not subject to CERCLA.

Hazardous and Solid Waste Amendments of 1984 (HSWA). The HSWA law was enacted to close RCRA loopholes and regulated leaking underground storage tanks (USTs) specifically. The SWRCB, the RWQCB, and the local County Division of Environmental Health, as a Certified Unified Program Agency (CUPA) program, oversee UST regulations and cleanup of leaking USTs. Asbestos Hazard Emergency Response Act of 1986 (AHERA). The AHERA is the federal legislation that governs the management and abatement of asbestos-containing materials in buildings.

National Emission Standards for Hazardous Air Pollutants; Asbestos, 40 CFR Part 61. This regulation requires the assessment and proper removal of asbestos-containing materials that could release asbestos when disturbed prior to the demolition of buildings.

Clean Air Act. The regulatory programs that govern stationary sources of air pollution apply to any facility that emits or has the potential to emit conventional pollutants: oxides of nitrogen and sulfur, carbon monoxide, VOCs or particulate matter. It may also apply to emission sources of certain toxic chemicals. In addition to the existing air district permitting programs required by state law and district rules, a new federal operating permit program must be implemented to meet EPA regulations adopted pursuant to Title V of the 1990 amendments of the Clean Air Act. Locally the Clean Air Act regulations are implemented and enforced by the San Luis Obispo APCD.

California Laws/Regulations

Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code). The Porter-Cologne Act established a regulatory program to protect water quality and protect beneficial uses of the state's waters. The Porter-Cologne Act also established the State Water Resources Control Board and nine regional boards as the main state agencies responsible for water quality in the state. Discharges of wastes (including spills, leaks, or historical disposal sites) where they may impact the waters of the state are prohibited under the Porter-Cologne Act, including the discharge of hazardous wastes and petroleum products. The assessment and remediation of these waters are regulated by the regional boards, the RWQCB administers such waters in the vicinity of the proposed project.

Title 22, California Code or Regulations. Title 22 of the CCR regulates the use and disposal of hazardous substances in California. It contains regulatory thresholds for hazardous wastes which are more restrictive than the federal hazardous waste regulations. The California Department of Conservation, Division of Oil Gas and Geothermal Resources (DOGGR) has the responsibility to implement the California Code of Regulations, under Title 14, Division 2, Chapter 2, which explains their responsibilities under CEQA.

California Health and Safety Code Sections 25500 et seq. The California community right-to-know hazardous material law applies to any facility that handles any hazardous material (chemical, chemical-containing products, hazardous wastes, etc.) in a quantity that exceeds reporting thresholds. The most common thresholds that trigger regulation based on that state statute are 500 pounds of solid, 55 gallons of liquid, and 200 cubic feet of compressed gas, based on the presence of individual chemicals. The basic requirements of hazardous materials and community right-to-know regulations for covered facilities include:

- ✓ Determining whether the facility handles hazardous materials;
- ✓ Immediate reporting of releases of hazardous materials;
- ✓ Submission and update of a Hazardous Materials Business Plan (including an accurate chemical inventory, site map showing hazardous materials storage locations, emergency response plan, and notification procedures) as required by the local administering agency;
- ✓ Notification of the local administering agency of the handling of specified quantities of acute hazardous materials and submission of a Risk Management Plan (RMP) as required;
- ✓ Annual submission for manufacturing facilities of a Toxic Chemical Release Report (Form R) if threshold amounts of certain toxic chemicals are made, or processed for use; and,
- ✓ Requirements for hazardous materials storage imposed by local administering agencies, fire departments, and California Occupational Safety and Health Administration (Cal/OSHA) standards.

California Air Resources Board - Air Toxics Control Measure. Under the California Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to construction permit issuance, a geologic evaluation is required to determine the presence or absence of naturally-occurring asbestos. If naturally occurring asbestos is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM before grading may begin. These requirements may include, but are not limited to, 1) preparation of an "Asbestos Dust Mitigation Plan," which must be approved by APCD before grading begins; and 2) an "Asbestos Health and Safety Program", as determined necessary by APCD.

California Fire Code. The 2001 California Fire Code has been adopted by CalFire/County Fire, which is the fire agency with jurisdiction over the project site. The California Fire Code contains minimum standards for many aspects of fire prevention and suppression activities. These standards include provisions for access, water supply, fire protection systems and fire resistant building materials. The California Fire Code also includes provisions for required setbacks for oil wells from buildings, storage

tanks, and streets and railways.

County of San Luis Obispo Regulations

Energy Element. In 1995, the County of San Luis Obispo adopted the Energy Element as part of the County's General Plan. The Energy Element contains a goal of protecting public health, safety and environment, and several policies that promote the stated goal. Applicable policies are summarized below:

> Policy 56. Encourage existing and proposed facilities to focus on measures and procedures that prevent oil, gas, and other toxic releases into the environment. This policy is to ensure that facilities: (1) take measures to prevent releases and spills, (2) prepare for responding to a spill or release, and 3) provide for the protection of sensitive resources. A review of a facilities spill response plan, or reports from other agencies, should be completed to monitor compliance.
>
> Policy 64. Guideline 64.1. To reduce the possibility of injury to the public, facility employees, or the environment, the applicant shall submit an emergency response plan which details response procedures for incidents that may affect human health and safety or the environment. The plan shall be based on the results of the comprehensive risk analysis. In the case of a facility modification, the existing response plan shall be evaluated by the safety review committee and revisions made as recommended.

Flammable and Combustible Liquid Storage. County LUO section 22.10.070 includes requirements on flammable and combustible liquid storage relating to: applicability, permit requirements, limitation on use, limitation on quantity, setbacks, additional standards within the URL or VRL, and including Cal Fire recommendations, as applicable. Without approval through a Conditional Use Permit, above ground storage of combustible liquid is 20,000 gallons and 2,000 gallons for flammable liquids.

County of Santa Barbara. Due to Santa Barbara County's extensive involvement with oil well drilling they have developed and updated a detailed program addressing oil well drilling, operation and closure within its county borders. As the SLO County's regulations appear limited on this subject, other Counties' regulations, such as Santa Barbara's, may provide additional measures that should be explored for this project.

Project-Related Elements

Oil production facilities commonly use potentially hazardous materials. Hazardous materials that are stored and used on such facilities include crude oil, natural gas, propane, diesel and various other chemically-based substances, such as corrosion inhibitors, solvents, lubricants and coolants. This request is not proposing an on-site fuel station and does not propose the use of any diluents.

As identified on Section B (Existing Setting) of the Initial Study, surrounding uses are mostly undeveloped, large lot properties with sparsely scattered residences.

The project is within a 'very high' severity risk area for fire.

The project is not within the Airport Review area or within the regulated area of an adopted airport land use plan.

The project is not expected to conflict with any regional evacuation plan.

The proposed project is not within one-quarter mile of an existing or proposed school.

The project site is not included on the Cortese list of hazardous materials sites.

Referrals – The following agencies have various levels of oversight or responsibilities relating to hazardous wastes and materials and will be contacted:

- CalFire – review project for potential fire risks, and ways to reduce these impacts (e.g., require adequate setbacks and surrounding vegetation removal/modifications to minimize potential for wildland fires, etc.);

Environmental Health – reviews and insures compliance of the following documents:

- ✓ Spill Prevention Countermeasure Control Plan (SPCC) for above ground petroleum storage (includes produced water);
- ✓ Hazardous Materials Business Plan;
- ✓ Hazardous Waste Management Plan;

Regional Water Quality Control Board – protect groundwater and surface waters;

APCD – Reviews project to minimize hazardous wastes/materials becoming airborne or insuring any release is at less than significant levels;

Division of Oil, Gas and Geothermal Resources (DOGGR) – has responsibility to ensure oil resources are protected and then removed efficiently and safely, and are involved with the following aspects:

- ✓ Requires the applicant to complete and execute an Oil Spill Contingency Plan;
- ✓ Insures proper well casing to avoid contamination to soil and aquifers between the oil reservoir (usually well below any potable aquifers) and the surface of the soil;
- ✓ Requires proper plugging and abandoning when well production is terminated;
- ✓ When proposed, verifies any re-injection (e.g., water) is using proper methods;
- ✓ Verifies any new drilling is using proper methods;
- ✓ Reviews project to include blowout prevention elements;
- ✓ Reviews project for subsidence detection and abatement;
- ✓ Includes provisions on proper transport of fluids during testing period.

Department of Toxic Substance Control – review project for existing soil contamination issues that need to be resolved, as well as review any hazardous materials/waste spill plan(s).

CDFG – Reviewing project elements for adverse impacts to species connected with downstream surface waters and other sensitive vegetation/ wildlife.

Impact. As stated above, the project may include the use of hazardous materials or may generate small amounts of hazardous wastes. There may also be some risk of explosion or oil release from the exploration aspect of the project. The potential for leakage from tanks and pipelines could occur without continual inspections and maintenance.

Drilling. The project proposes to initially drill for and establish up to 350 additional production wells. Drilling muds are proposed to be kept in containers (e.g., baker tanks, etc.) and either re-used on-site or disposed of at proper facilities. 40 additional water reinjection wells are also proposed

Increased Fire Risk. The California Department of Forestry and Fire Protection/San Luis Obispo County Fire Department (CAL FIRE), provides fire protection, emergency medical, and rescue services to the proposed project.

Based on the County's fire severity map the project is within the "very high" fire risk area, which identifies the susceptibility to wildland and brush fires. Fire hazard severity is determined by a number of factors including but not limited to: remoteness of the area, denseness of vegetation, the area's circulation network, the proximity to fire fighting facilities, the habitat type, and the degree of urbanization. Also, CAL FIRE's Response Time map shows it would take up to 10 minutes to reach the project once a call is received from the closest CAL FIRE station (SLO Airport).

Appropriate response times for fire protection services vary with the degree of urbanization. Appropriate response times for urban areas are up to six minutes, for suburban areas up to seven

minutes, and rural areas up to twelve minutes. Response times exceeding 15 minutes for structure fires provide little possibility of saving the structure, and 60 minutes or more could mean fires approaching critical levels in steep, chaparral covered, remote areas. For structure fires, CAL FIRE has mutual aid agreements with all fire protection agencies in the County, including the Cities of Pismo Beach and San Luis Obispo. An air tanker squadron at Paso Robles Airport is also available if needed (CAL FIRE 2003).

The applicant will be required to amend the existing emergency response plan which would include fires occurring at the oil field property. CalFire has reviewed the previous phases and has made recommendations on numerous aspects, including but not limited to, fire suppression equipment, fuel modification setbacks, fire water storage, access road clearances/capacities and signage.

Natural Gas/Propane. The formation from which the oil will be extracted is expected to generate some natural gas. A vapor recovery system will be installed and is expected to capture all natural gas encountered. All natural gas collected will be either used to help power the on-site cogeneration plant, or will be reinjected back into the oil formation. Electricity (via PG&E or co-gen plant) is proposed to provide power to the new wells on the expanded and new pad areas.

Mitigation/Action Required. Due to the complexity of multi-agency jurisdiction and potential for numerous agency permits relating to hazardous materials and/or hazardous wastes, a registered engineer familiar with all agency regulations associated with oil well development shall 1) evaluate these regulations, and 2) identify who is responsible for their implementation, and 3) look at historical implementation of previously-approved phases and its general effectiveness. This analysis shall include consideration of any applicant-proposed measures. The analysis should also include, but not be limited to, the following:

1. Consultation with CalFire, CA Department of Oil, Gas and Geothermal Resources, Regional Water Quality Control Board, and the CA Department of Fish and Game, Environmental Health, Department of Toxic Substance Control, Caltrans, and Air Pollution Control District.
2. Evaluate existing conditions and regulations, as described above;
3. Identification of any sensitive receptors (human and biological) relating to hazardous materials/ wastes;
4. Evaluate impacts associated with proposed drilling, storage and use of hazardous materials, and how hazardous wastes are addressed, and if existing regulations adequately address the impacts;
5. As needed, develop additional measures above current regulations to address potentially significant impacts.

8. NOISE *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Expose people to noise levels that exceed the County Noise Element thresholds?	☒	☐	☐	☐
b) Generate permanent increases in the ambient noise levels in the project vicinity?	☒	☐	☐	☐
c) Cause a temporary or periodic increase in ambient noise in the project vicinity?	☒	☐	☐	☐

8. NOISE

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
d) Expose people to severe noise or vibration?	☒	☐	☐	☐
e) If located within the Airport Review designation or adjacent to a private airstrip, expose people residing or working in the project area to severe noise levels?	☐	☐	☐	☒
f) Other: *Perceptible Noise*	☐	☐	☒	☐

Setting. While the proposed use is not considered noise sensitive, the project is within close proximity of loud noise sources (see Railroad information below). Sensitive noise receptors (scattered residences on large lots) surround the lands being leased or owned for oil development, including the expansion areas. Based on the Noise Element's projected future noise generation from known stationary and vehicle-generated noise sources, the project is within an acceptable threshold area.

SP Railroad

70 db (76 feet from railroad centerline)

65 db (163 feet from railroad centerline)

60 db (352 feet from railroad centerline)

General Information on Noise. Noise is generally defined as unwanted or objectionable sound. Decibels and other technical terms are defined in Table 1. Noise levels are measured on a logarithmic scale because of physical characteristics of sound transmission and reception. Noise energy is typically reported in units of decibels (dB). Noise levels diminish (or attenuate) as distance to the source increases according to the inverse square rule, but the rate constant varies with type of sound source. Sound attenuation from point sources, such as industrial facilities, is about 6 dB per doubling of distance. Heavily traveled roads with few gaps in traffic behave as continuous line sources and attenuate at 3 dB per doubling of distance. Noise from more lightly traveled roads is attenuated at 4.5 dB per doubling of distance.

Types of decibels

A-weighted decibel (dBA). Community noise levels are measured in terms of the A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear.

Equivalent noise level decibel (dB Leq). Equivalent noise level (Leq) is the average noise level on an energy basis for a specific time period. The duration of noise and the time of day at which it occurs are important factors in determining the impact on communities. Figure 1 provides a graphical representation of sound energy and potential adverse effects of common sounds.

Community Noise Equivalent (CNEL) and Day Night Average Level (DNL or Ldn) decibels. Noise is more disturbing at night and noise indices have been developed to account for the time of day and duration of noise generation. The Community Noise Equivalent (CNEL) and Day Night Average Level (DNL or Ldn) are such indices. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to a time-varying sound over a 24-hour period. The CNEL index penalizes night-time noise (10 p.m. to 7 a.m.) by adding 5 dB to account

for increased sensitivity of the community after dark. The Ldn index penalizes night-time noise the same as the CNEL index, but does not penalize evening noise.

Effects of Noise. People are subject to a multitude of sounds in the environment. Typical noise levels of indoor/outdoor environments and public response to these sounds are shown in Figure 1. Excessive noise cannot only be undesirable but may also cause physical and/or psychological damage. The amount of annoyance or damage caused by noise is dependent primarily upon three factors:

- ✓ the amount and nature of the noise,
- ✓ the amount of ambient noise present before the intruding noise, and
- ✓ the activity of the person working or living in the noise source area.

The difficulty in relating noise exposure to public health and welfare is one of the major obstacles in determining appropriate maximum noise levels. Although there has been some dispute in the scientific community regarding the detrimental effects of noise, a number of general conclusions have been reached:

- Noise of sufficient intensity can cause irreversible hearing damage;
- Noise can produce physiological changes in humans and animals;
- Noise can interfere with speech and other communication; and,
- Noise can be a major source of annoyance by disturbing sleep, rest, and relaxation.

Table 1. Definitions of Acoustical Terms

Term	Definitions
Decibel, DB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the sample sound pressure to the standard sound pressure, which is 20 micropascals (20 micronewtons per square meter)
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure
A-Weighted Sound Level, dB	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this reports are A-weighted
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 P.M. to 10:00 P.M. and after addition of 10 decibels to sound levels in the night between 10:00 P.M. and 7:00 A.M.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 P.M. and 7:00 A.M.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal or information content, as well as the prevailing ambient noise level

Perceptibility. Per the State's CEQA checklist, the following impact relating to perceptible changes in noise shall be considered:

- ❖ Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

The following is a general assessment of perceptibility by the average human ear:

- 1 dBA increase in sound level is perceived as a barely audible increase by most people;
- 3 dBA increase in sound level, is clearly perceived and is a clearly audible increase;
- 10 dBA increase in sound level, is perceived as a "doubling" of sound levels.

The County's Noise Element and Noise Ordinance do not address the issue of perceptibility nor assign a threshold of acceptability from increased levels of perceptibility. Due to the wide range of ambient noise levels between the urban and rural environments and the range of noisy activities allowed within each, this issue is evaluated on a case-by-case basis.

Thresholds. For the purposes of CEQA, the county has determined that the following thresholds apply to new development:

- ❖ Any increase above background (ambient) noise that is less than 3 dBA is less than significant.
- ❖ When a project (plus the background noise) results in an increase in noise between 3 and 10 dBA as measured from the nearest sensitive receptor, it is considered adverse. Also, based on consideration of the factors specified below, there is a potential for a significant noise impact that needs further consideration.
- ❖ When a project (plus the background noise) results in an increase in noise greater than 10 dBA, as measured from the nearest sensitive receptor that is a potentially significant impact warranting mitigation.

Significance Criteria. A project-related noise increase of between 3 and 10 dBA is considered adverse, but could be either significant or insignificant, depending upon the particular circumstances of a particular case. Factors to be considered in determining the significance of an adverse impact as defined above include, but are not necessarily limited to:

1. the resulting noise level;[1]
2. the duration and frequency of the noise;
3. the number of people affected; and
4. the land use designation of the affected receptor sites.

Noise due to construction activities is usually considered to be insignificant when it falls under the hours and definition specified in the County's Noise Ordinance exception for construction activities.

[1] For example, a noise level of 40 dBA would be considered quiet in many locations. A noise limit of 40 dBA would be consistent with the recommendations of the California Model Community Noise Control Ordinance for rural environments and with industrial noise regulations adopted by European jurisdictions.

Regulatory - County Noise Element

The Noise Element of the County General Plan provides policy framework within which potential future noise impacts are minimized. Many communities and cities within the County have adopted noise ordinances. A noise ordinance may be used to address noise levels generated by existing industrial, commercial and residential uses that are not regulated by federal or state noise level standards. The regulation of noise sources such as traffic on public roadways, railroad line operations and aircraft in flight is preempted by existing federal and/or state regulations, meaning that such sources generally may not be addressed by a noise ordinance. The County Noise Element addresses the prevention of noise conflicts from all of these sources.

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure and the types of activities involved. Noise-sensitive uses that have been identified by the County include the following:

- Residential development, except temporary dwellings;

- Schools-preschool to secondary, college & university; specialized education & training;
- Health care services (hospitals);
- Nursing and personal care;
- Churches;
- Public assembly and entertainment;
- Libraries and museums;
- Hotels and motels;
- Bed and breakfast facilities;
- Outdoor sports and recreation; and
- Offices.

Stationary Noise Sources

The primary sources of stationary noise within the County include many industrial, commercial and agricultural processes. Federal and State employee health and safety regulations (OSHA and Cal-OSHA) control noise production within an industrial or commercial facility or in close proximity to many types of agricultural equipment. However, exterior noise emissions from such operations have the potential to exceed locally acceptable standards at nearby noise-sensitive land uses.

Stationary noise control issues focus upon two objectives: to prevent the introduction of new noise-producing uses in a noise sensitive area, and to prevent encroachment of noise-sensitive land uses upon existing noise-generating facilities. The County attempts to achieve these objectives by applying performance standards and by requiring that new noise-sensitive uses in proximity to existing noise sources include receiver-based mitigation measures.

County LUO Section 22.10.170 addresses stationary vibration noise where any land use conducted in or within one-half mile of an urban or village reserve line shall be operated to not produce detrimental earth-borne vibrations perceptible at the points of determination identified in the following table:

Land Use Category in Which Vibration Source is Located	Point of Determination
Residential, Office & Professional, Recreation, Commercial	At or beyond any lot line of the lot containing the use.
Industrial	At or beyond the boundary of the Industrial category

Project Setting. Due to the existing oil field, the railroad and the heavily used arterial road (Price Canyon), ambient noise levels are expected to be relatively high during the daytime hours, and to a much lesser extent at night. Certain agricultural practices such as irrigated crops and vineyards are actively managed and typically include some generation of noise.

All heavy construction and operational traffic (i.e., tanker and maintenance trucks) generated by the previously-approved project phases travel southwest from the project site to Pismo Beach and Highway 101, and continuing south to Santa Maria. Employees and typical service vehicles (e.g., UPS, propane service, etc.) that commonly already serve the existing area would continue using Price Canyon Road in both directions.

Stationary sources: The project is adjacent to the Agriculture land use category. The ordinance requires that new stationary noise sources shall not exceed a daytime 50 decibel threshold at the property line, nor a 45 decibel threshold at night.

Some residences may be within view (direct “line-of-site”) of one or more of the proposed expansion pads and/or new well pads.

Noise studies have been prepared for previous phases.

The following examples identify several likely pieces of equipment that will generate loud noises:

Drawworks Engine - 105 db @ 3 ft.; 81 db @ 50 ft. ;46 db @ 3,200 ft.

Shaker - 96 db @ 3 ft.; 72 db @ 50 ft.

Generator House - 93 db @ 10 ft.; 79 db @ 50 ft.

Ongoing oil well pumps - 50 dB at 325 feet and 44 db at 1,300 feet (assumes no shielding).

The County's Land Use Ordinance exempts construction noise between 7 am and 9 pm on weekdays and 8 am and 5 pm for weekends.

Impact. The project will generate construction and installation noise and operational noise. Construction of the 350 wells will be over a 10-year period. Typical construction noises include the following: grading for access roads and oil pads; installation of above-ground pipelines and utility lines; drilling for an average of 35 wells a year, which includes at least several days per well of continuous drilling 24 hours a day plus setup and breakdown of portable rig; and well testing activities. Typical operational noise is expected to include; operational well pumps, oil truck hauling, redrilling, recompletions, workovers, other maintenance activities, decommission/ well closure activities. Existing infrastructure activities may occur longer than existing to accommodate the additional oil, water and natural gas generated. Additional vehicles (large trucks, additional employees) will be on-site as well as on public roads.

'Perceptible changes' in noise may increase somewhat, however due to the existing noise sources, it is not expected to result in a significant increase. Additional analysis may be necessary to verify this qualitative statement.

Additional traffic during construction/operations will generate additional passenger and heavy truck trips. Additional information has been requested from the applicant to help determine the type, number and timing of these additional trips. Given the extended nature of the construction, drilling and maintenance work over a 10-year period, the analysis will need to determine the applicability of the County's Land Use Ordinance exemption for short-term construction noise.

On transportation noise, larger truck diesel engine noise is expected to be about 78 dB @ 50 feet. This type of noise would be most noticeable and of concern for any nearby residences along the proposed haul route. Additional non-diesel vehicles (namely employees or small service vehicles) are not expected to exceed the 60 db threshold for transportation noise.

Mitigation/Action Required. Due to the potential for increased noise levels, additional analysis of noise impacts will need to be completed by a qualified person experienced in the field of environmental noise assessment and shall include, but not be limited to, the following:

1. Peer review for accuracy and adequacy previous noise studies relevant to the proposed expansion, and as needed, prepare supplemental analysis to address any deficiencies. Where found deficient, conduct additional noise analysis to ensure an adequate assessment of noise impacts has been completed. This shall include verification of existing sensitive noise receptor locations in relation to project components, as well as existing (e.g., topography) or proposed (applicant-proposed measures) means to attenuate noise.
2. Evaluate for potential significance of "perceptible" changes of noise to the closest sensitive noise receptors.
3. Recommendation and discussion of adequate and feasible mitigation measures to minimize potential noise impacts and reduce significant impacts to less than significant levels.

9. POPULATION/HOUSING

Will the project:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Induce substantial growth in an area either directly (e.g., construct new homes or businesses) or indirectly (e.g., extension of major infrastructure)?	☐	☒	☐	☐
b) Displace existing housing or people, requiring construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Create the need for substantial new housing in the area?	☐	☐	☒	☐
d) Other: _____	☐	☐	☐	☐

Setting In its efforts to provide for affordable housing, the county currently administers the Home Investment Partnerships (HOME) Program and the Community Development Block Grant (CDBG) program, which provides limited financing to projects relating to affordable housing throughout the county. The County's Inclusionary Housing Ordinance requires provision of new affordable housing in conjunction with both residential and nonresidential development and subdivisions.

Impact. The project will result 10-15 permanent employees. In addition, contracted crews will be needed during the following activities: grading/construction of expanded or new pads and access roads, which may include new pipelines and/or utilities; redrilling, recompletions, workovers, decommissioning/well closure. These types of activities could result in an average of at least two such crews on-site throughout the 10-years projected to complete the expansion. Each contract crew will likely range between 20 and 50 employees.

Mitigation/Conclusion. The project will result in a small population increase with minor additional housing impacts anticipated. The project will mitigate its cumulative impact to the shortage of affordable housing stock by providing affordable housing unit(s) by payment of the housing impact fee. No additional mitigation measures are expected or considered necessary.

10. PUBLIC SERVICES/UTILITIES

Will the project have an effect upon, or result in the need for new or altered public services in any of the following areas:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Fire protection?	☐	☒	☐	☐
b) Police protection (e.g., Sheriff, CHP)?	☐	☒	☐	☐
c) Schools?	☐	☒	☐	☐
d) Roads?	☐	☒	☐	☐
e) Solid Wastes?	☐	☒	☐	☐
f) Other public facilities?	☐	☐	☐	☒

10. PUBLIC SERVICES/UTILITIES *Will the project have an effect upon, or result in the need for new or altered public services in any of the following areas:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
g) Other: _____	☐	☐	☐	☐

Setting. The project area is served by the following public services/facilities:

Police: County Sheriff Location: Los Osos (Approximately 20 miles to the northwest)

Fire: Cal Fire (formerly CDF) Hazard Severity: Very High Response Time: 0-10 minutes

Location: Approximately 4.5 miles to the northwest

School District: San Luis Coastal Unified School District.

Existing Regulations

The County-adopted Public Facilities Fee Ordinance (Title 18) provides for the collection of a fair-share fee from new development to help mitigate for cumulative impacts on public facilities. This fee currently being collected helps fund capital improvement projects in the following areas: libraries, fire, general government, parks and recreation, and sheriff's patrol.

Fire Protection

The California Department of Forestry and Fire Protection/San Luis Obispo County Fire Department (CAL FIRE) is the primary responder to provide fire protection, emergency medical, and rescue services for the proposed project. A mutual aid agreement with the Cities of Pismo Beach and San Luis Obispo exists to assist CalFire when there is a fire outside of the City's boundaries. CalFire is also available to the City should they request assistance. A provision of this agreement states that aid would be provided as long as it does not place any undue hardship on the agency providing support to the primary responder.

Based on the County's fire severity map the project is within the "very high" fire risk area, which identifies the susceptibility to wildland and brush fires. Fire hazard severity is determined by a number of factors including but not limited to: remoteness of the area, denseness of vegetation, the area's circulation network, proximity to firefighting facilities, habitat type, and the degree of urbanization. CAL FIRE's Response Time map shows it would take up to 10 minutes to reach the project once a call is received from the closest CAL FIRE station (SLO Airport area). The closest CAL FIRE station is approximately 4.5 miles to the northwest.

Appropriate response times for fire protection services vary with the degree of urbanization. Appropriate response times for urban areas are up to six minutes, for suburban areas up to seven minutes, and rural areas up to twelve minutes. Response times exceeding 15 minutes for structure fires provide little possibility of saving the structure, and 60 minutes or more could mean fires approaching critical levels in steep, chaparral covered, remote areas. For structure fires, CAL FIRE has mutual aid agreements with all fire protection agencies in the County, including the Cities of Pismo Beach and San Luis Obispo. An air tanker squadron at the Paso Robles Airport is also available if needed (CAL FIRE 2003).

The applicant will be required to prepare and maintain an emergency response plan which includes addressing any fires occurring at the oil field property. Relating to emergency response issues, this plan will include, but not be limited to: who are the primary and secondary responders to an incident and their ability to handle oil fires, what additional equipment/suppressants will need to be maintained on-site in case of such an event, the process to be used by the on-site operator to notify fire

responders when such an event is occurring, etc. CalFire will need to review the proposed project and make recommendations on numerous aspects, including but not necessarily limited to, fire suppression equipment, fuel modification setbacks, fire water storage, access road clearances/ capacities and signage. There is existing fire water storage as required through previous phases.

Police Protection and Emergency Services

The County Sheriff's Department provides police and patrol services in the unincorporated areas of the County. The County is divided into three areas; North, Coast, and South. The Sheriff's Department is headquartered from the operational facility at Camp San Luis Obispo. Each area has its own substation, which is supervised by a sergeant and staffed with approximately 23 deputies and two legal clerks.

The project would be served primarily by the Coast Station, which is located at 2099 10th Street in Los Osos, serving an area of 900 square miles. The Coast Station personnel provide service to San Simeon/Hearst Castle area, Cambria, Harmony, Cayucos, Los Osos/Baywood Park, rural San Luis Obispo, and Avila Beach/Port San Luis. Planning areas served by the Coast Station include: Nacimiento, Adelaida, North Coast, Estero, San Luis Bay Inland, San Luis Obispo, Los Padres, and Las Pilitas. Current average response times generally range from 5 to 30 minutes with longer response times to the more rural outlying areas of the service jurisdiction.The California Highway Patrol (CHP) services San Luis Obispo County's highways, with stations located in San Luis Obispo and Templeton. They are available to respond in emergency situations, but generally do not respond to residential calls.

Emergency services generally include ambulance and hospital service. Private companies based throughout the County provide ambulance service. Response times are generally good with the exception of the more rural portions of the County where the large area being served and the distances involved lend to poorer levels of service. Hospital services are provided by Twin Cities Hospital in Templeton, Arroyo Grande Community Hospital in the City of Arroyo Grande, and by French and Sierra-Vista in the City of San Luis Obispo.

Solid Waste Collection

County LUO Section 22.10.150 determines when new land uses must include provision of identified trash collection, pickup and recycling areas, and sets design standards for such areas.

Trash collection and disposal for this project will be accomplished by the following method: individual direct haul to landfill. The County currently has three permitted public landfill facilities that accept a variety of municipal solid waste: Cold Canyon, Chicago Grade and Paso Robles. Cold Canyon Landfill will be the likely landfill to be used and is located approximately 6 miles south of the City of San Luis Obispo on Highway 227. The landfill is under the jurisdiction of, and permitted by, the California Integrated Waste Management Board. This facility not only accepts waste for disposal, but also provides recycling opportunities for the users.

To reduce impacts to the landfill, construction and operation wastes will separate out recyclable components for re-use and diverted from the waste stream.

Schools

The project is located in the San Luis Coastal School District. The Resource Management System Annual Resource Summary Report (2010) identified the school district's "level of severity" on student capacity as a "II" for high school capacity, which means the current "enrollment is approaching school capacity". Elementary and middle school capacities are not currently experiencing any problems.

School districts within the County provide enrollment and capacity information relative to individual schools within their jurisdiction. Capacity is defined as design or maximum. Enrollment at 28 out of 58 (48.3 percent) of the County's schools exceeds their design capacities (SLO County 2003). Design capacity is exceeded by the addition of re-locatable temporary classrooms to a school site, but

there is a practical limit to the number of temporary facilities that can be added before core facilities become so burdened that the educational environment suffers. The maximum capacity is usually about 25 percent higher than design capacity. The County's Department of Planning and Building reports that 18 out of 23 communities in the County have severe school resources capacity problem, where the enrollment is higher than the school's design capacity.

Countywide, several districts have been experiencing significant enrollment declines over the last several years, particularly in elementary schools. The decline is generally attributed to high housing costs in some parts of the county, which deter families with young children from locating there (SLO County 2003).

Revenue for facilities construction comes from both State and local sources, including developer fees. A statutory fee that also contributes to funding facilities is the Stirling fee. This fee is based on the amount of building construction proposed and is adjusted annually. The State Building Program is the primary source of funding for school facility projects. Most County school districts participate in school construction programs, whereby new development contributes a portion of the cost of new facilities, while the remainder is supplied by State and local resident taxes. Local funding alternatives include community approval of a general obligation bond for school construction. The General Obligation (GEO) Bond election process requires two-thirds voter approval. From 1986 to June 2000, only 55% of the school districts that held GEO Bond elections successfully earned the two-thirds voter approval for school facility funding. However, Proposition 39, which allows for approval of school construction bonds at a 55% threshold, was approved in the year 2000.

Due to gas price increases, many school districts are looking at ways to reduce costs to help offset these unanticipated costs. While not currently being considered by the District, reduction in school bus services is one option that could help offset these costs.

The current school bus route and times will need to be checked for potential conflicts with the proposed haul route and time of use.

Roads

The County maintains Price Canyon and Ormonde Roads. Roads within Pismo Beach are managed by the City. Highways 101 and 227 are state facilities managed by Caltrans. Additional discussion on road impacts can be found in the following Transportation section.

Impact. Based on the proposed project, there will be public service impacts in the following areas.

Fire/Life Safety

The project proposes to expand an existing oil well field into an area with a 'very high' fire severity area with a fire station response time of up to 10 minutes. The project will need to comply with the fuel modifications measures as set forth in the Uniform Fire Code, which requires all flammable vegetation be removed within 30 feet of the proposed structure, and that extensive modification or removal of vegetation between 30 feet and 100 feet from these uses may be needed to provide for a defensible space from wildland fires, as well as to reduce wildland fires from originating from the project areas.

In addition, 10 feet of substantial fuel modification along each side of the access driveway will be required. Please refer to the Biological Resource section as this vegetation removal requirement relates to impacts on oak trees and other sensitive vegetation. The project will also be subject to meeting CAL FIRE's Fire Safety Plan, which includes other measures to reduce fire hazards and improve the fire department's ability to defend the area in the event of a fire or reduce response times in the case of a life safety emergency. These include making access road improvements to allow access to the site in all weather conditions.

The project is subject to the County's Public Facility fee, which is intended to address cumulative impacts to various public services including fire safety.

All containers with flammable or explosive potential (e.g., crude oil, propane tanks, etc.) shall be

designed to meet the various regulatory codes on storage of such substances to minimize potential for fires or explosions.

School

For new employees that already live in the area, there would be no additional impacts from new students to the school district. For employees coming from out of the area, it is unknown if they will live within the serving School District, or have children. It should be assumed that approval of this project will generate a small number of new students to the District.

School bus routes and times will need to be determined and compared to the proposed haul route and likely times for vehicles on any overlapping routes to determine potential impacts.

Roads

Road impacts are discussed in the Transportation section.

Mitigation/Action Required. Due to the potential for significant impacts to public services, additional analysis is needed to consider the following:

1. Consultation with agencies involved with public services, including the California Department of Forestry/County Fire Department (CalFire), the San Luis Obispo County Sheriff's Department, Public Works, and the San Luis Coastal Unified School District.
2. Evaluation and discussion of the past and present status of police, fire, waste disposal and school services in the project area.
3. Identification and discussion of significant impacts to public services, or resulting from inadequate public services, that could result from the development of the project. This shall include a detailed discussion of the proposed project and applicant-proposed measures relating to fire/ life safety, and the adequacy of CalFire and project elements to adequately reduce fire risk.
4. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential impacts related to public services.

11. RECREATION

	Will the project:	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a)	***Increase the use or demand for parks or other recreation opportunities?***	☐	☒	☐	☐
b)	***Affect the access to trails, parks or other recreation opportunities?***	☐	☒	☐	☐
c)	***Other*** _____	☐	☐	☐	☐

Setting. Previous project phases required the delineation of the Juan Batista De Anza Historic Trail easement along Pismo Creek. This is consistent with what is discussed in the County's Parks and Recreation Element. Improvements were not proposed due to the trail going through some of the active oil field area, and the potential safety issues of introducing the public into an active oil field.

Price Canyon Road is used regularly by recreational bicyclists. While most of this road is wide enough to accommodate cyclist, there are several narrow sections within the project limits that push the cyclist out into the vehicle travelway.

The project is not proposed in a location that will affect any park, coastal access, and/or Natural Area.

Due to the road's scenic qualities and connectability between Pismo Beach and the City of San Luis Obispo, recreational cyclists can be found using this route regularly during the week and wekends. The 2005 County Bike Plan recognizes the portion of Price Canyon Road between Ormonde Road and the City of Pismo Beach as having an existing Class II bike lane, and that a Class II does not exist and is recommended between Ormonde Road and Highway 227. Recent bridge improvements at the railroad undercrossing and Price Canyon Road have been made to accommodate Class II lanes for this section of road.

Impact. The project will result in additional permanent and contract employees who will add to the demand on recreational resources.

The project will increase vehicle traffic (including large trucks) onto Price Canyon Road, potentially diminishing the recreational experience of cyclists using Price Canyon Road. Given that most vehicles on Price Canyon Road are traveling at the speed limit of 55 mph, and that the road's curves can limit sight visibility at certain locations, traffic and bicycle safety are currently compromised for the narrow sections of Price Canyon Road between Ormonde and Highway 227.

Mitigation/Action Required. Due to the potential for public recreation impacts, additional analysis is needed to be performed by a qualified individual with expertise in recreation, and shall include, but not necessarily be limited to, the following:

1. Consultation with the County Department of General Services – Parks and Recreation Division, and County Public Works.
2. Identification of the existing recreational demands and deficiencies in the region, including further assessment of the De Anza trail and Class II bike improvements along Price Canyon Road.
3. Identification and evaluation of the project's demand on recreational facilities, and what, if any aspects of the project will offset the increased demands.
4. Discussion of the adequacy of existing fees, and as appropriate, identification and discussion of feasible mitigation measures which could be included in the project to minimize potential impacts related to recreation.

12. TRANSPORTATION/CIRCULATION *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Increase vehicle trips to local or areawide circulation system?	☐	☐	☐	☐
b) Reduce existing "Level of Service" on public roadway(s)?	☐	☐	☒	☐
c) Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance, slow vehicles)?	☒	☐	☐	☐
d) Provide for adequate emergency access?	☐	☒	☐	☐
e) Conflict with an established measure of effectiveness for the performance of the circulation system considering all modes of transportation (e.g. LOS, mass transit, etc.)?	☐	☐	☐	☐
f) Conflict with an applicable congestion management program?	☐	☐	☒	☐

12. TRANSPORTATION/CIRCULATION *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐
h) Result in a change in air traffic patterns that may result in substantial safety risks?	☐	☐	☒	☐
i) Other: _____	☐	☐	☐	☐

Setting. The County has established the acceptable Level of Service (LOS) on road capacities for this [urban area as "D" or better] [rural area as "C" or better]. The existing road network in the area (including Price Canyon Road and Ormonde Road) is operating at acceptable levels. Based on the most recent County traffic counts the following information is provided:

Road	Cross St.	Date	ADT	AM peak time	AM peak volume	PM Peak time	PM peak volume	Peak Day	Peak Day volume
Price Cyn Rd	S of Hwy 227	17-Jun-10	6964	7 am	674	1700	805	Thurs	8222
Ormonde Rd	W of Noyes Rd	26-Aug-08	251	8 am	21	1600	28	Tues	278

Highway 101 at Pismo Beach is identified as Segment 4 of this state facility. Non peak periods on this section range from LOS C to D, while peak periods range from LOS D to F.

Additional impacts will occur within the City of Pismo Beach and to Highway 101. Caltrans identifies this segment of Highway 101 (Segment 4 – from Nipomo to SLO) as having an LOS range of D to F during peak periods. Additional analysis is necessary to evaluate these potential impacts.

The City of Pismo Beach or Caltrans have not yet provided a response regarding the project's potential impacts to the city streets or state facilities, respectively.

The County's Circulation Element (Framework for Planning) includes 11 goals and objectives intended for new development to help maintain acceptable levels of service and traffic safety, as well as help maintain a high quality environment.

While no application has been submitted, the County is aware of some initial discussions regarding a potential pipeline to the area (from the Conoco Phillips facility to the south). Should such a pipeline be constructed, the need for transport trucks would be substantially reduced.

The SP railroad goes through the project limits. Access to the eastern portion of the oil field will be via Ormonde Road. Where this road goes under the railroad there are two blind corners due to 90-degree turns. Safety signage is currently in place to minimize traffic impacts.

The County has requested information from the applicant regarding any discussions with the railroad on the potential of installing a spur to allow for oil transport and material/supply railroad cars to be picked up/ dropped off within the oilfield area. Should such a spur be installed, certain traffic impacts would be substantially diminished.

Impact. The project will result 10-15 permanent employees. In addition, contracted crews will be

needed during the following activities: grading/construction of expanded or new pads and access roads, which may include new pipelines and/or utilities; redrilling, recompletions, workovers, decommissioning/well closure. These types of activities could result in an average of at least two such crews on-site throughout the 10-years projected to complete the expansion. Each contract crew will likely range between 20 and 50 employees. Oil transport will require about 26 additional truckloads to transport 4,000 bpd. Additional information has been requested to help clarify some of the details and overlap of these activities.

The applicant proposes to schedule certain activities so they will be outside of 'peak hour' windows.

With regards to traffic safety and sight distance for left-turning movements, based on existing road speeds and LOS, the vertical and horizontal road curves are acceptable as it relates to existing access points. However, due to the potential increase in slow moving large vehicles making left turns or accelerating onto this high speed road, additional analysis is needed to determine if improvements are needed for left turn lanes and/or acceleration lanes.

It is expected that County Public Works will identify that this heavy truck travel will accelerate the need to repair the County roads over time and will request a specific "fee per trip" to be collected for use in the County's Road Maintenance Fund. This County Road Maintenance Fund is used for repair and maintenance of all rural county roads.

In addition, the project may have cumulative impacts to certain road sections, such as the Santa Maria Bridge on Highway 101. This bridge is currently being widened.

There is some potential that a pipeline could be constructed or the possibility of installing a railroad spur, both providing alternatives to truck travel for oil transport and/or supplies/materials. These options should be evaluated.

Due to the project's distance from urban areas, most alternative travel modes may not be realistic or practical. However, carpooling should be evaluated further and what incentives could be used.

The project is not within close proximity of an airport nor could it have an influence on existing air traffic patterns.

Bike lanes and the De Anza Trail discussion can be found in the Recreation section.

Mitigation/Action Required. Due to the potential for significant traffic impacts an analysis will need to be performed by a registered Engineer with expertise in traffic, and shall include, but not be limited to, the following:

1. Consultation with the California Department of Transportation, SLOCOG, SLORTA, County Public Works Department, City of Pismo Beach, City of Santa Maria, County of Santa Barbara, and the Union Pacific Railroad.
2. Peer review of any existing traffic reports on the adequacy of the analysis and appropriateness of the mitigation measures, and/or preparation of additional traffic analysis to evaluate transportation impacts identified above.
3. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential impacts related to traffic capacity or traffic safety.

13. WASTEWATER

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
Will the project:				
a) Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems?	☐	☒	☐	☐

13. WASTEWATER

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
b) Change the quality of surface or ground water (e.g., nitrogen-loading, day-lighting)?	☐	☒	☐	☐
c) Adversely affect community wastewater service provider?	☐	☐	☐	☒
d) Other: _____	☐	☐	☐	☐

Setting. Regulations and guidelines on proper wastewater system design and criteria are found within the County's Plumbing Code (hereafter CPC; see Chapter 7 of the Building and Construction Ordinance [Title 19]), the "Water Quality Control Plan, Central Coast Basin" (Regional Water Quality Control Board [RWQCB] hereafter referred to as the "Basin Plan"), and the California Plumbing Code. These regulations include specific requirements for both on-site and community wastewater systems. These regulations are applied to all new wastewater systems.

For on-site septic systems, there are several key factors to consider for a system to operate successfully, including the following:

- ✓ Sufficient land area (refer to County's Land Use Ordinance or Plumbing Code) – depending on water source, parcel size minimums will range from one acre to 2.5 acres;
- ✓ The soil's ability to percolate or "filter" effluent before reaching groundwater supplies (30 to 120 minutes per inch is ideal);
- ✓ The soil's depth (there needs to be adequate separation from bottom of leach line to bedrock [at least 10 feet] or high groundwater [5 feet to 50 feet depending on percolation rates]);
- ✓ The soil's slope on which the system is placed (surface areas too steep creates potential for daylighting of effluent);
- ✓ Potential for surface flooding (e.g., within 100-year flood hazard area);
- ✓ Distance from existing or proposed wells (between 100 and 250 feet depending on circumstances); and
- ✓ Distance from creeks and water bodies (100-foot minimum).

To assure a successful system can meet existing regulation criteria, proper conditions are critical. Above-ground conditions are typically straight-forward and most easily addressed. Below ground criteria may require additional analysis or engineering when one or more factors exist:

- ✓ the ability of the soil to "filter" effluent is either too fast (percolation rate is faster or less than 30 minutes per inch and has "poor filtering" characteristics) or is too slow (slower or more than 120 minutes per inch);
- ✓ the topography on which a system is placed is steep enough to potentially allow "daylighting" of effluent downslope; or
- ✓ the separation between the bottom of the leach line to bedrock or high groundwater is inadequate.

Based on Natural Resource Conservation Service (NRCS) Soil Survey map, the soil types for the project is provided in the listed in the previous Agricultural Resource section. While a couple of the listed soils do not have any limitations, the main limitation(s) of the rest of the soils for wastewater

effluent include:

-***poor filtering characteristics*** due to the very permeable nature of the soil, without special engineering will require larger separations between the leach lines and the groundwater basin to provide adequate filtering of the effluent. In this case, due to the limited availability of information relating to the poor filtering soil characteristic, the following additional information may be needed prior to issuance of a building permit: soil borings at leach line location showing that there is adequate separation, or plans for an engineered wastewater system that shows how the basin plan criteria can be met.

--***shallow depth to bedrock***, which is an indication that there may not be sufficient soil depth to provide adequate soil filtering of effluent before reaching bedrock. Once effluent reaches bedrock, the chances increase for the effluent to infiltrate cracks that could lead directly to groundwater source or surrounding wells without adequate filtering, or allow for daylighting of effluent where bedrock is exposed to the earth's surface. In this case, due to limited availability of information relating to the shallow depth to bedrock characteristic, the following additional information may be needed prior to issuance of a building permit: soil borings at leach line location(s) showing that there is adequate distance to bedrock. If adequate distance cannot be shown, a County-approved plan for an engineered wastewater system showing how the basin plan criteria can be met will be required.

--***steep slopes***, where portions of several of the soil units contain slopes steep enough to result in potential daylighting of wastewater effuent. In this case, future leach lines may be on or located within close proximity of steep slopes where some potential of effluent daylighting exists. A registered civil engineer familiar with wastewater systems, may need to prepare an analysis that shows the location and depth of the leach lines will have no potential for daylighting of effluent.

--***slow percolation***, where fluids will percolate too slowly through the soil for the natural processes to effectively break down the effluent into harmless components. The Basin Plan identifies the percolation rate should be greater than 30 and less than 120 minutes per inch. If leach lines are proposed in such soils, a soils report will need to be done to identify the percolation rate, and what can be done to meet Basin Plan requirements.

Impacts/Mitigation. The project will result 10-15 permanent employees. In addition, contracted crews will be needed during the following activities: grading/construction of expanded or new pads and access roads, which may include new pipelines and/or utilities; redrilling, recompletions, workovers, decommissioning/well closure. These types of activities could result in an average of at least two such crews on-site throughout the 10-years projected to complete the expansion. Each contract crew will likely range between 20 and 50 employees. Oil transport will require about 26 additional truckloads to transport 4,000 bpd. It appears at certain times over the next ten years there will be over 100 people on-site on a daily basis. Additional information has been requested to help clarify some of the details and the potential overlap of these activities.

Also, based on this increase of permanent and contract personnel, additional information has been requested of the applicant to demonstrate how wastewater effluent will be handled. Where the following can be demonstrated by the applicant, additional wastewater impacts would be considered less than significant:

- ✓ The project has sufficient land area per the County's Land Use Ordinance to support an on-site system;
- ✓ The soil's percolation rate is between 30 to 120 minutes per inch;
- ✓ There is adequate soil separation between the bottom of the leach line to bedrock or high groundwater;
- ✓ The soil's slope is less than 20%;

- ✓ The leach lines are outside of the 100-year flood hazard area;
- ✓ There is adequate distance between proposed leach lines and existing or proposed water wells;
- ✓ The leach lines are at least 100 feet from creeks and water bodies.

Based on the above discussion and the large area in which to find acceptable conditions, it is expected the project will be able to design an on-site system that will meet CPC/Basin Plan requirements. Prior to building permit issuance and/or final inspection of the wastewater system, the applicant will need to show to the county compliance with the County Plumbing Code/ Central Coast Basin Plan, including any above-discussed information relating to potential constraints. Therefore, based on the project being able to comply with these regulations, potential groundwater quality impacts are considered less than significant.

14. WATER & HYDROLOGY

Will the project:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
QUALITY				
a) Violate any water quality standards?	☐	☒	☐	☐
b) Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.)?	☐	☒	☐	☐
c) Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?	☐	☒	☐	☐
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?	☐	☐	☒	☐
e) Change rates of soil absorption, or amount or direction of surface runoff?	☐	☒	☐	☐
f) Change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?	☐	☐	☒	☐
g) Involve activities within the 100-year flood zone?	☐	☒	☐	☐
QUANTITY				
h) Change the quantity or movement of available surface or ground water?	☐	☒	☐	☐
i) Adversely affect community water service provider?	☐	☐	☐	☒

14. WATER & HYDROLOGY *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
j) Expose people to a risk of loss, injury or death involving flooding (e.g., dam failure,etc.), or inundation by seiche, tsunami or mudflow?	☐	☐	☒	☐
k) Other: _____	☐	☐	☐	☐

Setting.

The topography of the project is nearly level to very steeply sloping Pismo Creek, and tributaries, course through the proposed development. As described in the NRCS Soil Survey, the soil surface is considered to have low erodibility.

Projects involving more than one acre of disturbance are subject to preparing a Storm Water Pollution Prevention Plan (SWPPP) to minimize on-site sedimentation and erosion. When work is done in the rainy season, the County's Land Use Ordinance requires that temporary erosion and sedimentation measures to be installed.

DRAINAGE – The following relates to the project's drainage aspects:

Within the 100-year Flood Hazard designation? Yes

Closest creek? Pismo Creek Distance? Within project limits

Soil drainage characteristics: Very poorly drained to well drained

For areas where drainage is identified as a potential issue, the Land Use Ordinance (LUO Sec. 22.52.110) includes a provision to prepare a drainage plan to minimize potential drainage impacts. When required, this plan would need to address measures such as: constructing on-site retention or detention basins, or installing surface water flow dissipaters. This plan would also need to show that the increased surface runoff would have no more impacts than that caused by historic flows.

SEDIMENTATION AND EROSION – Soil type, area of disturbance, and slopes are key aspects to analyzing potential sedimentation and erosion issues. The project's soil types and descriptions are listed in the previous Agriculture section under "Setting". As described in the NRCS Soil Survey, the the project's soil erodibility is as follows:

Soil erodibility: Low to high

A sedimentation and erosion control plan will be required for all construction and grading projects (LUO Sec. 22.52.120) to minimize these impacts. When required, the plan is prepared by a civil engineer to address both temporary and long-term sedimentation and erosion impacts. Projects involving more than one acre of disturbance are subject to the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which focuses on controlling storm water runoff. The Regional Water Quality Control Board is the local extension who monitors this program.

Impact – Water Quality/Hydrology

With regards to project impacts on water quality the following conditions apply:

- ✓ The project will be subject to standard County requirements for drainage, sedimentation and erosion control for construction and permanent use;
- ✓ The project will be disturbing over an acre and will be required to prepare a SWPPP, which will

be implemented during construction;

- ✓ The project may be on highly erodible soils, and/or on moderate to steep slopes;
- ✓ The project may be within a 100-year Flood Hazard designation;
- ✓ The project may be closer than 100 feet from the closest creek or surface water body;
- ✓ All disturbed areas will be permanently stabilized with impermeable surfaces and landscaping;
- ✓ The project is subject to the County's Plumbing Code (Chapter 7 of the Building and Construction Ordinance [Title 19]), and/or the "Water Quality Control Plan, Central Coast Basin" for its wastewater requirements, where wastewater impacts to the groundwater basin will be less than significant;
- ✓ All hazardous materials and/or wastes will be required to properly stored on-site, which will include secondary containment should spills or leaks occur;

Water Quantity

Typical water usage per person per day is about 60 gallons. New permanent employees is expected to be up to 15 employees. Contract crews of up to 50 people per crew will also be on-site on a regular basis over the 10 year expansion period. For the purposes of this preliminary water use assessment it is assumed two such crews will be on-site at any given time. Therefore, the total of 115 people are identified as being on-site daily. Watering of new vegetation is unknown at this time. Landscape screening will likely be required for pads that are found to be publicly visible. Also, on-site replanting of oaks and manzanita may be proposed (this type of irrigation is expected to be needed more than 7 years and will diminish to zero over this time as these plants become established). The project's employee water usage is estimated as follows:

Indoor: 7.73 acre feet/year (AFY) (115 personnel @ 60 gpd);
Outdoor: Unknown AFY

Sources used for this estimate include one or more of the following references: County's Land Use Ordinance, 2000 Census data, Pacific Institute studies (2003), City of Santa Barbara Water Demand Factor & Conservation Study 'User Guide' (1989).

The above estimate does not include any other project element that will use water, such as: dust control/ compaction during grading, cogeneration activities, steam generation injection, etc.

The project has been previously approved to install a water treatment system to treat some of the produced water to tertiary levels. Additional information has been requested of the applicant to identify if this water can or will be used for some of the proposed water consuming activities. It is expected that most of this treated water will be discharged to Pismo Creek, which in turn will recharge the aquifer and increase availability for riparian habitat and wildlife, as well as down gradient users.

Water Usage – Dust control. Based on the Maricopa County (Arizona) Air District's "Guidance For Application For Dust Control Permit" water quantities needed to spray for dust control, approximately 225 gallons per acre per application would be needed (assuming proper application rates and sprayers are used on water truck). The applicant will be providing the amount of areas to be disturbed.

Water usage – replanting. If on-site replacement trees are planted, watering is expected to require about two gallons per week per tree for at least three years. At this time it is not known how many trees will be proposed for planting on-site with this information requested of the applicant. If the Oak Woodland tree fee were applied for all of the tree impacts, short-term watering needs would be substantially reduced.

Fire Water. CalFire may require additional fire water storage for the proposed expansion.

Surface Water. With regards to surface water quality, projects involving more than one acre of disturbance are subject to preparing a Storm Water Pollution Prevention Plan (SWPPP) to minimize

on-site sedimentation and erosion. When work is done in the rainy season, the County Ordinance requires that temporary sedimentation and erosion control measures be installed during the rainy season.

In addition, several other required regulations or plans (e.g., Hazardous Materials Business Plan, Risk Management Plan, California Occupational Safety and Health Administration (Cal/OSHA) standards, Spill Prevention Countermeasure Control Plan, Hazardous Waste Management Plan, and Oil Spill Contingency Plan, etc.) will be required, which directly and indirectly reduce impacts to surface water quality.

Project Production Water. The following is a brief overview of the project's "production water". The formation from which the oil will be extracted is expected to include a high percentage of water. The oil formation is approximately 1,000 to 1,500 feet below ground and not connected to potable water sources. Once extracted, this "production" water is separated from the oil and currently returned to the formation from which it came. Some of the production water is converted to steam before it is reinjected with the intent to make contact with the unextracted oil in the formation more viscous for easier extraction. As with the extraction wells, the reinjection wells must be completely cased, per DOGGR specifications to avoid mixing with any aquifer that may exist above the oil formation.

Impact. The project proposes to use off-site water for all project water needs. Water-related needs associated with temporary construction activities include: construction crew (bottled water), dust suppression, fire water, concrete washing, and other equipment washing. This water will be trucked in to the site.

Bottled water will also be provided for the potable needs of the one on-site, 24-hour employee (3 employees). Based on the county's worksheet, one "office" employee typically uses about 0.153 acre feet per year (AFY). The other office/trailer water needs will be trucked to an on-site storage tank. A small amount of landscaping is expected for screening purposes of well pad #2, which is water truck accessible. Water for oak replanting may be as much as 0.1 afy, but could be less if fewer oak trees are impacted during construction or the tree fee program is used. Planting is expected to be in areas accessible for a water truck. As proposed, there will be no water extracted from the Huasna Valley aquifer.

Based on the above mentioned project components, assuming the stored fire water is a "one time" activity (and not included in the annual needs), project water demands are estimated to be as much as 1.1 AFY. However, as stated above, most of the operational water needs can be reduced with alternative approaches, or obtained from off-site sources.

Regarding surface water quality, as proposed, the project will result in the disturbance of approximately 1.5 acres. As identified in the "Setting" section, a number of plans or regulations are required with the intent of reducing the chance for leakage or spillage of hazardous materials or wastes, as well as minimize sedimentation and erosion, thereby reducing the potential for surface water runoff impacts to the ephemeral tributary and Huasna Creek.

Should spillage or leakage occur of hazardous wastes or materials, without adequate prevention measures, impacts could be potentially significant (see discussion under Hazardous Waste and Materials).

All production water will be reinjected back into the formation from which it came via the one proposed water injection well.

All extraction or reinjection wells must meet DOGGR specifications (e.g., casing, etc.) to insure oil or production water does not make contact with any potable water supplies. Water monitoring from nearby wells has been done as part of previous approvals.

Mitigation/Action Required. While no potentially significant groundwater quantity impacts have been identified when existing requirements are followed, a certified engineering geologist shall be retained to evaluate these issues and include, but not be limited to, the following analysis:

1. Consultation with the County Public Works Department, RWQCB, Environmental Health, California Department of Fish & Game, DOGGR.
2. Peer review all previous water reports for accuracy and adequacy, and as necessary conduct additional analysis if any data gaps are identified. The previous Phase IV water treatment project includes substantial detail regarding the existing water conditions.
3. Detailed discussion on the extraction and processing efforts as it relates to production water separation and reinjection; the relationship of the "nearby" potable groundwater basin shall be discussed along with any pertinent natural geological features that could relate to connectivity between these formations;
4. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential impacts related to groundwater availability.

Water Quality. Additional water quality analysis is necessary by a qualified hydrogeologist and should include, but not be limited to, the following:

1. Consultation with the Regional Water Quality Control Board, Environmental Health Division, County Agricultural Commissioner's Office, California Department of Fish & Game, and U.S. Fish & Wildlife Service, National Marines Fishery Service.
2. Identification and discussion of the potential for potable water contamination to occur as a result of:
   a. Surface water runoff.
   b. Topographical alteration.
   c. Development.
3. Identification of nearby watercourses and their potential to support sensitive aquatic life. Work with qualified biologist(s) to evaluate project's impacts on surface water quality as it relates to any down gradient sensitive resources.
4. Identification and discussion of feasible mitigation measures, if any, which could be included in the project to minimize potential impacts related to water quality.

15. LAND USE

Will the project:

	Inconsistent	Potentially Inconsistent	Consistent	Not Applicable
a) Be potentially inconsistent with land use, policy/regulation (e.g., general plan [County Land Use Element and Ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects?	☐	☒	☐	☐
b) Be potentially inconsistent with any habitat or community conservation plan?	☐	☒	☐	☐
c) Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project?	☐	☒	☐	☐

15. LAND USE *Will the project:*	Inconsistent	Potentially Inconsistent	Consistent	Not Applicable
d) Be potentially incompatible with surrounding land uses?	☐	☒	☐	☐
e) Other: _____	☐	☐	☐	☐

Applicable Land Use Regulations (see also discussions within each issue analysis)

The Land Use Element (LUE) for the San Luis Obispo County General Area Plan establishes the patterns for land use within the County, and sets out standards for development. The LUE consists of three major components: the Framework for Planning, the Area Plans, and the official land use category (zoning) maps. The Framework for Planning provides an overview of the County's land use policies, defines the land use categories (zoning) applied to properties, and the allowable uses within each category. The Framework for Planning – Inland Area establishes general goals and policies for those unincorporated areas of the County located outside of the coastal zone, while the Coastal Framework applies to the portion within the coastal zone. There are eleven Area Plans covering the inland segment of the County. These plans contain policies, programs, land use regulations, and maps for specific geographic areas within the County. Within each plan are development standards specific to that area. The Framework for Planning is used together with the adopted Area Plans, Land Use Maps, and the County's Land Use Ordinance for review and evaluation of new development. The Energy Extractive Area (EX) combining designation overlay exists to recognize the oil resources below.

The proposed project has the potential to be inconsistent with applicable County plans and policies established to preserve and protect agricultural resources. The Agricultural Element, Inland Framework for Planning, and various Area Plans are examples of County documents containing various policies intended to reduce the impacts to agricultural lands and uses. Potential impacts include but are not limited to discouraging conversion of agricultural lands, minimizing conflicts between agricultural and urban uses, and the protection of prime agricultural soils.

There are many County plans and policies designed to protect and preserve the open space resources. These goals and policies include but are not limited to the prevention of urban sprawl, conversion of rural areas to urban land uses, and preserving visual resources.

Discouraging urban sprawl and preventing the conversion of rural lands to urban uses are important in maintaining the open space resources of the County. The Coastal Zone Framework for Planning and the Conservation and Open Space Element are two examples of plans that specifically address the prevention of urban sprawl.

Plans and policies have also been developed to protect the scenic beauty of the County. One mechanism the County uses to maintain visual resources has been the establishment of Highway Corridor Design Standards for protecting public views from scenic roads and highways, such as along portions of Highway 101 and Highway 1. While certain road corridors have been identified as having high quality scenic attributes (with some being designated a Sensitive Resource Area (SRA) combining designation), not all important view sheds are officially designated. One of the stated goals of the San Luis Obispo Area Plan is to: "Protect the scenic values of natural landforms" (Page 1-6, 2002). Additional examples of policies designed to protect scenic resources include those found in the San Luis Bay Area Plan encouraging the preservation of natural ridgeline profiles and backdrops along the Highway 101 corridor (Page 6-10, 2002), and the goals identified in the Avila Specific Plan designed to maintain and preserve unobstructed public views of the ocean (Page 9, 2000).

ELEMENTS

The County's Conservation and Open Space Element (COSE) was approved by the County Board of Supervisors on May 11, 2010. The COSE contains goals, policies, and strategies to conserve, protect, and restore biodiversity and open space in order to enjoy scenic beauty and recreation, eliminate or minimize premature and unnecessary conversion of open space to urban uses, maintain public health and safety, and support a vital economy. This COSE consolidates and revises five existing General Plan elements and incorporates new material to address timely and relevant conservation issues. The COSE consolidates the County's Environment Plan (the Conservation, Historic, and Esthetic Element) and the Open Space Element (extracted from the Agriculture and Open Space Element). The COSE contains goals, policies, and implementing strategies for air quality, biological resources, cultural resources, energy, mineral resources, open space, soil resources, water resources, and visual resources. As an adopted Element of the County's General Plan, under State law the County's decision makers must consider a project's consistency with the COSE.

The Economic Element contains goals, policies, and programs that establish a context and priorities for economic development in San Luis Obispo County. The goals of the Economic Element recognize the importance of economic activity in enabling the residents of San Luis Obispo to find employment and pursue the lifestyles that they value. The policies and programs for each goal describe principles that will guide decisionmaking and actions that will be taken to achieve those goals

The Parks and Recreation Element was adopted in 2006. The purpose of the Parks and Recreation Element is to: (1) provide policy guidance regarding the provision of park and recreation services; (2) document the County's existing park and recreation resources; and, (3) facilitate the evaluation of park and recreation needs including those resources that are outside of the County's management during the land use decision process. The Element establishes goals, policies, and implementation measures for management, renovation, and expansion of existing, and development of new, parks and recreation facilities in order to meet existing and projected needs and to assure an equitable distribution of parks throughout the county.

The two primary principles of the County Safety Element are emergency preparedness and managed development to reduce risk. The Safety Element identifies potential emergencies and natural disasters within the county, and includes goals and policies for response during an emergency or natural disaster, and avoidance of unnecessary risk.

The San Luis Bay Inland planning area encompasses 61,018 acres (95 square miles) in the south central coastal portion of the county, extending from and including most of Montana de Oro on the north to the Nipomo Mesa on the south. It includes the non-coastal zone portions of the Five Cities urban areas of Pismo Beach, Grover Beach, Arroyo Grande, Oceano and Halcyon, and Avila Beach outside the coastal zone. The San Luis Bay Inland Area Plan (San Luis Obispo County, 2002) designates land use categories within the planning area, with agriculture (approximately 40%) and rural lands (approximately 30%) as the dominant land uses. Outside of the urban and village reserve lines, an area of residential rural and residential suburban designated land, known as the Arroyo Grande fringe, covers approximately 16 percent of the planning area. The San Luis Bay Inland planning area includes the urban area of Arroyo Grande and portions of the urban areas of Avila Beach, Pismo Beach, Grover Beach, and Oceano.

California’s Porter-Cologne Water Quality Act (1969) establishes the responsibilities and authorities of the nine Regional Water Quality Control Boards (RWQCB) and the State Water Resources Control Board (SWRCB). The Basin Plan (Water Quality Control Plan for the Central Coast Region) is the Central Coast Region RWQCB master water quality control planning document. The objective of the Basin Plan is to show how the quality of the waters in the Central Coast Region should be managed to provide the highest water quality reasonably possible. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater. The Basin Plan includes programs and implementation measures to achieve water quality objectives, and planning priorities are identifies in a triennial review of the Basin Plan.

The County of San Luis Obispo has developed the Bikeways Plan in order to identify needed bikeway routes, accessory facilities such as bike parking, coordination with other modes of transportation, promotional and educational programs, and potential funding sources for these facilities and programs. The first plan was completed in the early 1990s and it has been updated completely several times since then. The plan recognizes and encourages a favorable quality of life through further enhanced use of bicycle transportation, which can lead to: better air quality; reduced traffic, parking congestion and noise levels; and increased mental and physical health of those who ride. The Bikeways Plan shares many of the goals of the County General Plan – Circulation Element, the Air Pollution Control District's Clean Air Plan, and Council of Government's Regional Transportation Plan, the local surrounding cities' Bikeways Plans as well as surrounding unincorporated communities' circulation and planning studies. Together, these documents form an important resource as the base condition for bicycle transportation planning in San Luis Obispo County.

Mitigation/Conclusion. The proposed project will need to be reviewed for consistency with policy and/or regulatory documents referenced in this Initial Study relating to the environment and appropriate land use (e.g., County Land Use Ordinance, Local Coastal Plan, etc.). Referrals will be sent to numerous agencies to review for various policy consistencies (e.g., APCD on Land Use Strategies of the Clean Air Plan, etc.).

16. MANDATORY FINDINGS OF SIGNIFICANCE *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☒	☐	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

For further information on CEQA or the county's environmental review process, please visit the County's web site at "www.sloplanning.org" under "Environmental Information", or the California Environmental Resources Evaluation System at: http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines for information about the California Environmental Quality Act.

Exhibit A - Initial Study References and Agency Contacts

The County Planning Department has contacted various agencies for their comments on the proposed project. With respect to the subject application, the following have been contacted (marked with an ☒) and when a response was made, it is either attached or in the application file:

Contacted	Agency	Response
☒	County Public Works Department	**None-Referral/NOP response requested**
☒	County Environmental Health Division	**None-Referral/NOP response requested**
☒	County Agricultural Commissioner's Office	**None-Referral/NOP response requested**
☐	County Airport Manager	**Not Applicable**
☐	Airport Land Use Commission	**Not Applicable**
☒	Air Pollution Control District	**None-Referral/NOP response requested**
☒	County Sheriff's Department	**None-Referral/NOP response requested**
☒	Regional Water Quality Control Board	**None-Referral/NOP response requested**
☐	CA Coastal Commission	**Not Applicable**
☒	CA Department of Fish and Game	**None-Referral/NOP response requested**
☒	CA Department of Forestry (Cal Fire)	**None-Referral/NOP response requested**
☒	CA Department of Transportation	**None-Referral/NOP response requested**
☐	Community Service District	**Not Applicable**
☒	Other See EIR Mailing List for More Agencies	**None-Referral/NOP response requested**
☐	Other _____	**Not Applicable**

*** "No comment" or "No concerns"-type responses are usually not attached*

The following checked ("☒") reference materials have been used in the environmental review for the proposed project and are hereby incorporated by reference into the Initial Study. The following information is available at the County Planning and Building Department.

☒ Project File for the Subject Application

County documents

☒ Airport Land Use Plans
☒ Annual Resource Summary Report
☒ Building and Construction Ordinance
☐ Coastal Policies
☒ Framework for Planning (Coastal & Inland)
☒ General Plan (Inland & Coastal), including all maps & elements; more pertinent elements considered include:
  ☒ Agriculture & Open Space Element
  ☒ Energy Element
  ☒ Environment Plan (Conservation, Historic and Esthetic Elements)
  ☒ Housing Element
  ☒ Noise Element
  ☒ Parks & Recreation Element
  ☒ Safety Element
☒ Land Use Ordinance
☐ Real Property Division Ordinance
☒ Trails Plan
☒ Solid Waste Management Plan
☒ San Luis Bay (Inland) Area Plan
☐ Circulation Study

Other documents

☒ Archaeological Resources Map
☒ Area of Critical Concerns Map
☒ Areas of Special Biological Importance Map
☒ California Natural Species Diversity Database
☒ Clean Air Plan
☒ Fire Hazard Severity Map
☒ Flood Hazard Maps
☒ Natural Resources Conservation Service Soil Survey for SLO County
☒ Regional Transportation Plan
☒ Uniform Fire Code
☒ Water Quality Control Plan (Central Coast Basin – Region 3)
☒ GIS mapping layers (e.g., habitat, streams, contours, etc.)
☐ Other

In addition, the following project specific information and/or reference materials have been considered as a part of the Initial Study:

- 1978 Final EIR prepared for Phase I (Arroyo Grande Thermal Project [Teal]) for 54 wells;

- 1981 Final EIR prepared for Phase II (Arroyo Grande Thermal Project Grace Petroleum Corp. Development Plan) for 40 additional wells and steam generator;

- 1984 Final EIR American Pacific International, Inc. AG Oil Field for eight additional wells and tank facility;

- 1994 Final Supplemental EIR prepared for Phase III (Shell Western Development Plan) for 65 additional wells and three steam generators;

- 2004 Final EIR prepared for Phase IV (Plains Exploration and Production Phase IV Development Plan for 95 additional wells, 30 injection wells, and three steam generators;

- 2005 EIR Addendum prepared (on 2004 FEIR)(Plains Exploration and Production Phase IV Conditional Use Permit - D010386D) for a water reclamation system.