



July 3, 2018

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Sent via e-mail to jdargel@countyofsb.org

Re: Scoping Comments for the PetroRock UCCB Production Plan Project

Dear Mr. Dargel:

The following comments are submitted by the Environmental Defense Center (“EDC”) on behalf of the Sierra Club Los Padres Chapter (“Sierra Club”), regarding the scope of environmental impacts and concerns that should be addressed in the Draft Environmental Impact Report (“DEIR”) for the PetroRock UCCB Production Plan Project (“Project”).

The Sierra Club, a national nonprofit organization with roughly 146,000 members in California, is dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth’s ecosystems and resources; to educating and encouraging humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. EDC is a non-profit, public interest law firm that protects and enhances the environment in Santa Barbara, Ventura, and San Luis Obispo Counties through education, advocacy, and legal action. Both EDC and the Sierra Club have members who live, visit, work, and recreate in the area and would be affected by the Project.

As discussed in detail below, the Project has the potential to cause irreparable damage to important sensitive habitat and native vegetation, endanger wildlife, impact geologic stability, and degrade our air quality and dwindling water resources. In order to ensure the DEIR complies with the California Environmental Quality Act (“CEQA”), a complete and accurate description of the Project and an analysis of the following issues and impacts must be disclosed.

Environmental Setting

As stated in the CEQA Guidelines, “[t]he environmental setting will normally constitute the baseline physical condition by which a lead agency determines whether an impact is significant.” CEQA Guidelines §15125(a). An EIR must include an accurate description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published. *Id.* The environmental setting constitutes the baseline physical conditions by which the County will use to determine whether an impact is significant. *Id.*

When the environmental baseline is not properly understood, environmental impacts cannot be properly assessed. As a result, there is no basis to determine whether avoidance is feasible or what other mitigation measures are necessary to reduce significant impacts to the extent possible before a project can be approved, as required pursuant to CEQA Guidelines §§ 15002(a)(3) and 15021(a)(2). *See also* Pub. Res. Code §21081(a)(3) and *Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.App.4th 105, 134.

In order to properly assess the Project’s impacts, the DEIR must provide a complete and accurate description of the Project’s environmental setting and include the following:

- **The DEIR Must Disclose Locations of Creeks, Drainages and Flow-paths:** The Environmental Setting should map and disclose the locations of all creeks, drainages, and wetlands onsite or downstream from the site, including the Sisquoc River. The DEIR should also disclose all culverts and pathways for flow around facilities in order to properly assess biological, hydrological, and other impacts of an oil or produced water spill.
- **The DEIR Must Disclose CalEnviro Rankings to Help Define Baseline Conditions:** The DEIR should disclose the Project site’s baseline setting with respect to the California OEHHA CalEnviro 3.0 percentile rankings for groundwater threats, surface water impairment, threats to drinking water, hazardous cleanup sites, solid waste sites, and other factors pertinent to the potential effects of the Project. This will help establish relevant baseline environmental conditions in the area of the Project site and determine its cumulative effects on local communities.
- **The DEIR Must Disclose and Describe Soil Contamination:** The DEIR should disclose and describe all soil contamination on and adjacent to the site, including contamination caused by prior oil operations, contamination disclosed on the Santa Barbara County EHS SMU Master List, and contamination identified in GeoTracker. In addition, soil testing must be performed in the Project footprint prior to release of the DEIR so that the DEIR can analyze the Project’s effects regarding contaminated soils, and

related environmental effects and impacts to public health and safety. The DEIR should disclose all soil contamination, including any tar or other pollutants located in any creeks or drainages located downstream from the Project site, which could be transported by increased flows downstream or into the Sisquoc River. This information will be important for evaluating the impacts of the proposed Project, including potential for contamination of creeks, wetlands, and the Sisquoc River, and impacts on human health.

- **The DEIR Must Disclose Groundwater Contamination in Project Vicinity Including the Cat Canyon Oilfield:** The DEIR should disclose all groundwater contamination in the Project area and vicinity in order to properly evaluate the Project-specific and cumulative impacts to water resources, agriculture, and human health. This includes disclosing the Ontiveros family water well on the Project site that is contaminated with toluene and benzene.¹
- **Existing Water Use Must Be Disclosed:** In order to assess direct and cumulative impacts to water resources, the DEIR must disclose the applicant's current water use, including all freshwater and groundwater from existing wells and sources that support its current operations.

Project Description

It is a fundamental precept of CEQA that an environmental review document must define a "project" as "*the whole of an action*, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment..." CEQA Guidelines § 15378(a) (emphasis added). The DEIR's project description must be accurate in order to determine the scope of environmental review. *County of Inyo v. City of Los Angeles* (1977) 71 Cal.3d 185, 199. When the project description fails to discuss the complete project, the environmental analysis will likely reflect the same mistake. *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376.

The project description must include an accurate and complete description of each component of the Project, including but not limited to:

- **Accurate well information:** The location of each proposed oil well, the API, and an exact description of how oil will be extracted from that specific well, which oil extraction method will be utilized, the specific quantity and composition of all fluids that will be injected over the lifetime of the well, the depth of the drilling and formations penetrated, and the specific well pressures that will be injected for each injection, including the total cumulative injection pressure and fluids for each new and existing well;

¹ See Mr. Ontiveros' scoping comments to Santa Barbara County Planning and Development, June 18, 2018.

- **Acidizing Treatment information:** A description of each acid treatment, whether it is used for well maintenance or extraction, the composition and identification of the acidizing fluid used, including but not limited to drilling muds and concentration of acid, and mud acids;
- **Acid Volume Threshold:** Calculation of the Acid Volume Threshold for each proposed well bore must also be disclosed so the public and the decisionmakers can be informed whether the acidizing treatment qualifies as a well stimulation treatment per Public Resources Code Section 3157 as required under the SB 4 Well Stimulation Treatment Regulations;
- **Water Disposal Well information:** The location of each proposed water disposal injection well, and the quantity, frequency, and composition of produced water that will be injected into it over the life of the project;
- **Accurate Site Maps:** The DEIR must also adequately disclose and map the entirety of the Project Site boundary, which must include all components of the Project, above ground and below ground, including all well pads, even RM-1 and RM-2 that are not located on leased lands, roads, pipelines, and all project equipment;
- **Directionally Drilled Well Information:** The identification and path of all proposed directionally drilled wells for the life of the project, including directional well surveys;
- **Number of Project Re-Drills:** The number of re-drills and re-worked wells, if any are proposed, must be accurately accounted for in the Project Description;
- **Procedures for Well Shut Ins:** The exact procedure for dealing with a well that is no longer producing, including procedures for well shut-ins, plugging and capping, and remediation;
- **Detailed Description of All Roads:** An accurate description of all proposed roads, and whether they are paved, the condition, the width and length must be included;
- **Natural Gas Pipeline:** The proposed natural gas pipeline must be described and analyzed as part of the Project;

- **Impacts from Mitigation Measures:** a detailed description of all proposed mitigation measures with enough information to assess potential impacts from the proposed mitigation measure, such as paved roads.²

Impacts to Biological Resources

An EIR must inform decision makers and the public regarding the significant effects of a proposed project, ways to minimize such effects, and alternatives to the project. Pub. Res. Code § 21061; CEQA Guidelines § 15121(a). To be an effective informational document, an EIR must evaluate potential environmental impacts (Guidelines § 15126, 15126.2), discuss mitigation measures which could minimize significant adverse impacts (Guidelines § 15126.4), and consider alternatives that would achieve most of the basic project objectives while avoiding or substantially lessening any significant effects of the project (CEQA Guidelines § 15126.6).

In order to fully disclose the Project's potentially significant impacts on biological resources as required by CEQA, the DEIR must address the following:

- **Extend Biological Survey Area for Spills and Leaks Down Creeks and Drainages:** The Biological Survey Area should extend downstream along all creeks, drainages, and swales capable of conveying oil or produced water from spills onsite. At a minimum, this includes surveying Bradley Creek to the Sisquoc River, and down the Sisquoc River.
- **Conduct Protocol-level Surveys for Special-status Plant and Animal Species Prior to DEIR:** Protocol-level or "focused" surveys for special-status plant and wildlife species must be done *before the DEIR is prepared* in order to properly define the biological baseline setting for the purposes of environmental review and the DEIR's biological impact analysis. With respect to special-status plants, the California Department of Fish and Wildlife ("CDFW") recommends following the Department's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see <http://www.dfg.ca.gov/habcon/plant/>).³ With respect to California Tiger Salamander, CDFW requires focused surveys to follow agency protocol contained in *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander*.⁴ Reconnaissance-level surveys are inadequate to establish the biological baseline for the DEIR. Deferring focused surveys until after project approval deprives the public of pertinent facts about the presence or absence of species.

² CEQA Guidelines § 15126.4(a)(1)(D).

³ Letter from Betty J. Courtney, Environmental Program Manager 1, South Coast Region, California Department of Fish and Wildlife, to Mr. Matt Young, Planner, Santa Barbara County Planning and Development Department (September 24, 2015).

⁴ CDFW, *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see <http://www.dfg.ca.gov/habcon/plant/>) (2003).

- **Biological Surveys Must be Conducted at the Correct Time of the Year:** It is important to conduct wildlife surveys at the correct times during the year (e.g., seasonally or relative to rainfall events) in order to accurately identify target animal and plant species at the times when they are expected to be present.
- **Biological Surveys Must Be Conducted During Normal Climatic Conditions:** The Application states that “no special status plant species are expected to occur on these sites” due to periodic and recent maintenance activities, and that none were observed during surveys dated March 27 and April 16, 2015.⁵ However, these surveys were done during a significant, prolonged drought which can limit or mask the presence of plant species. Surveys done near the end of the worst drought in recorded history, for instance, will potentially overlook species and habitats that can only be identified during normal rainfall conditions. This is especially important to identifying wetlands. During droughts, wetlands can be nearly indistinguishable from nearby uplands. Similarly, it is unlikely that drought-time surveys will identify special-status wetland-dependent wildlife. The DEIR should be informed by proper biological surveys *performed during and after normal rainfall conditions*.
- **PetroRock’s Biological Assessment identifies 690 Square Feet of Potential Wetlands but Does Not Disclose Whether a Wetland Delineation was Performed:** The Biological Assessment discloses a 690 square foot potential wetland but does not disclose the results of a wetland delineation.⁶ The Biological Assessment notes that the vegetation and hydrology criteria for wetlands may have been met, but that the soil has recently been disturbed and identifying hydric soils might be difficult. This overlooks the important fact that under the County’s CEQA Thresholds and Guidelines Manual, *only one criteria need be present to qualify an area as wetland*.⁷ Without a wetland delineation, there is no way to identify the acreage of wetlands present and the Project’s impacts to potential wetlands. Wetland delineations must be performed following more normal rainfall conditions and prior to the DEIR.
- **The DEIR Should Evaluate the Potential Impacts of Flooding on the Suspension Bridge and Pipelines:** The DEIR should discuss whether flooding is a trigger for pipeline leaks as discussed in the ERG West Cat Canyon Revitalization Plan Project DEIR.⁸ It should also evaluate and disclose the flooding impacts on the suspension bridge and all pipeline creek crossings, whether attached to bridges, drilled, or trenched.

⁵ PetroRock’s June 25, 2015 Biological Assessment at 51.

⁶ *Id.* at 54.

⁷ Santa Barbara County, Environmental Thresholds and Guidelines Manual at 27-28 (July 2015).

⁸ ERG West Cat Canyon Revitalization Plan Project DEIR at 4.9-16 (June 2018).

Impacts to Surface and Groundwater Quality and Water Resources

PetroRock’s Project proposes to utilize cyclic steam injection and steam flooding to extract oil and gas reserves in the lower sands of the Sisquoc Formation in the Cat Canyon oilfield — an area that has been drilled through, injected into, extracted from, and re-drilled/re-worked for over one hundred years. The proposed Project site overlies the Santa Maria River Valley Groundwater Basin, in the Santa Maria Valley. Numerous shallow and deep-water wells presently tap into aquifers in the Santa Maria Groundwater Basin and are used for domestic and agricultural uses.

PetroRock’s *Water Source Study*, conducted by Katherman Exploration Co., LLC, admits that “[t]he success of such an operation requires a reliable source of water (either potable and/or non-potable).”⁹ However, a truly “reliable source of water” in Santa Barbara County is illusory. The County remains in a multi-year drought emergency and struggles to adapt to the unpredictable impacts of climate change. Today the County relies on potable water from a multitude of sources including, groundwater, reservoir systems, the State Water Project, recycled water, and desalination.¹⁰

Groundwater use varies greatly by region but makes up about 30% of California’s annual water supply in normal years and up to 60% in drought years.¹¹ In Santa Barbara County, groundwater is an extremely important resource, making up nearly 75% of the total water used in the County and is the primary source of potable water for many County residents.¹² In fact, most of the water used in northern Santa Barbara County comes from groundwater supplies, including the towns of Sisquoc and Los Alamos.¹³

The Notice of Preparation (“NOP”) acknowledges that “[l]ocal residents and agricultural activities rely on groundwater as their sole source of fresh potable water.”¹⁴ Nevertheless, PetroRock’s Project will require approximately 300 acre-feet of water per year at peak production, a portion of which will be fresh water sources.¹⁵

As discussed below, PetroRock’s proposed Project presents a host of significant impacts to surface and groundwater resources that must be adequately and fully addressed in the DEIR, including the following:

⁹ PetroRock Water Source Study at 2 (June 24, 2015).

¹⁰ County of Santa Barbara, Public Works Department, *Water Supply*, available at: <http://www.countyofsb.org/pwd/watersupply.sbc>.

¹¹ County of Santa Barbara, WaterWise, *Where Does Your Water Come From?*, available at: <http://www.waterwisesb.org/where.wwsb>.

¹² *Id.*; See also County of Santa Barbara, Public Works Department, *Water Supply*, available at: <http://www.countyofsb.org/pwd/watersupply.sbc> (“Groundwater is a primary source of potable water for many County residents”).

¹³ *Id.*

¹⁴ Santa Barbara County, Notice of Preparation of Draft Environmental Impact Report for PetroRock UCCB Production Plan Project at 22 (May 25, 2018).

¹⁵ NOP at 16.

- **The DEIR Must Disclose All Water Use Needed for the Project:** The amount of water PetroRock is proposing to withdraw from new sources of water is significant. The NOP states that approximately 300 acre-feet of water per year will be needed, a portion of which will be fresh water sources.¹⁶ As pointed out by a local landowner at the PetroRock Scoping Meeting, the estimated 300 acre-feet of water per year is a significant amount of water for the area, particularly since the water supply is already limited, and far exceeds the average amount of water needed to support permanent crops grown in the area, such as grapes on a vineyard.

PetroRock’s Water Source Study (“Study”) states that “new sources of water” must be developed for its proposed cyclic steaming project because “[c]urrently there are no available water sources on the subject leases.”¹⁷ These “new sources” include drilling new water wells into the Paso Robles Formation, which is a critical source of fresh water for farmers and communities in and around Cat Canyon, and the Careaga Sands, which the Study describes as a “new source of untapped fresh water.”¹⁸ The findings and conclusions set forth in the Study are extremely alarming. The DEIR must analyze whether “new sources of water” are even available for this Project and evaluate the impacts to water supply and water quality as a result of withdrawing from “new sources of water.” The DEIR should also clearly identify where PetroRock proposes to drill new water wells, withdraw water, and inject produced water, and fully analyze the impacts of this proposed water use. Finally, the DEIR must address why the Careaga Sands were not previously used as a source of fresh water and analyze all impacts to the local water supply if PetroRock withdraws from this formation.

Finally, the DEIR must disclose water use that the County has deemed “vested,” if any, and the basis for that determination. At the very least, vested rights to withdraw a certain amount of water, particularly *fresh* water, is a cumulative impact that must be analyzed in the DEIR.

- **The DEIR Must Analyze Impacts to Surface Water Quality Due to the Construction and Operation of the Proposed Pipeline Across Bradley Canyon Creek:** PetroRock is proposing to construct a span of pipelines “to traverse the intermittent blue-line creek in Bradley Canyon either through trenches or a 200-foot pipeline suspension bridge to interconnect multiple pads to the Tank Battery.”¹⁹ The construction and operation of these pipelines may seriously threaten surface water quality, particularly given the risk for

¹⁶ *Id.*

¹⁷ PetroRock Water Source Study at 4 (June 24, 2015).

¹⁸ *Id.* at 6.

¹⁹ NOP at 22.

release of hazardous materials to the creek.²⁰ In fact, ERG’s DEIR admits as much, “Although existing regulations provide sufficient protection to prevent significant impacts in most cases, some impacts may occur as a result of flooding, which is known to have caused several of the past spills described above, and which could be difficult to clean and remediate due the flood.” (ERG DEIR at 4.9-16.) These impacts must be disclosed and mitigated in the DEIR.

- **The DEIR Must Disclose All Fresh Water Use:** The DEIR must disclose the quantities of potable, freshwater proposed to be used for all components of the Project, including: (1) drilling; (2) steaming operations; and (3) for offices, dust control, and fire protection. The DEIR must also provide an in-depth analysis of the impacts from extracting fresh water from the Santa Maria Groundwater Basin, including the cumulative effect on existing users in the basin.
- **Aquifer Contamination Must be Disclosed:** The NOP states that fresh water aquifers may be contaminated “if steep injection results in steam-oil-water mixtures following geologic pathways or leaks from damaged oil well casings and seals.”²¹ The impacts of this contamination must be thoroughly addressed in the DEIR, along with mitigation measures, and the cumulative effect of aquifer contamination by existing and all reasonably foreseeable projects that have and will continue to inject fluids into or near the aquifer.
- **The DEIR Must Disclose Water Use Required for Mitigation:** PetroRock’s DEIR must set forth the amount of fresh water that will be proposed for dust control. This figure must be an accurate calculation of the gallons per acre per day needed to control fugitive dust emissions, taking into account wide roads, windy days, and any other relevant factors. The DEIR’s fugitive dust emission analysis must be consistent with the PM₁₀ Mitigation Measures mandated by Santa Barbara County Air Pollution Control District (“APCD”).²²
- **The DEIR Must Disclose Impacts to Groundwater Resulting from Oil Spills and Oil Seeps:** Oil seeps are low energy, non-eruptive leakages of oil seeping to the ground surface, typically from a shallower, oil-bearing zone such as the Careaga Sands. Seeps can increase in frequency of occurrence and volume with the injection of steam, as seen in Pacific Coast Energy Company’s Orcutt Hills operation. The NOP acknowledges that “[n]earby

²⁰ *Id.*

²¹ NOP at 22.

²² Santa Barbara County Air Pollution Control District, *Scope and Content of Air Quality Sections in Environmental Documents* at 23-24 (June 2017), available at: <https://www.ourair.org/wp-content/uploads/ScopeContentJune2017-LimitedUpdate.pdf>.

wells could be impacted if oil seeps or spills to the ground contaminate stream channels and groundwater recharge areas.”²³ Any and all threats to groundwater and surface water quality caused by project-induced seeps must be thoroughly analyzed in the DEIR.

Additionally, adverse effects from seep management over the life of the project must be thoroughly analyzed in the DEIR. Seep management, such as the installation of seep cans, are unpredictable and can result in severe impacts to biological resources and water quality if not properly managed. PetroRock’s DEIR must adequately present mitigation measures proposed to minimize any negative effects on resources.

- **The DEIR Must Address Impacts to Public Health from Groundwater Contamination:** All water wells on the Project site should be tested for contaminants and the results should be reported in the DEIR. During the PetroRock Scoping Meeting on June 18, 2018, County staff was notified by a member of the Ontiveros family, whose ranch is located on a portion of PetroRock’s Project site, that he conducted private water well tests on his property which conclusively found groundwater contamination from petroleum hydrocarbons, including benzene and toluene. Given this information, the DEIR must disclose and consider information provided to the County regarding petroleum hydrocarbon pollution identified in Mr. Ontiveros’ new drinking and/or agricultural water well. The County must analyze whether oil operations in Cat Canyon have caused or are causing ongoing pollution of groundwater in the Santa Maria area.
- **The DEIR Must Evaluate the Impacts of Injecting Produced Water into the Aquifer:** An aquifer is an underground body of rock that contains or can transmit groundwater. Pursuant to EPA Underground Injection Control (“UIC”) regulations, EPA may exempt underground sources of water for use by energy companies for oil extraction or disposal purposes in compliance with EPA’s UIC requirements under the Safe Drinking Water Act.²⁴ PetroRock²⁵ has applied for an expansion of the existing aquifer exemption in Cat Canyon, the status, applicants, and details of which must be discussed in the DEIR. The DEIR should also identify which aquifer(s) PetroRock is currently injecting into and which aquifer(s) PetroRock is proposing to inject in if its Application is approved. The DEIR must disclose and evaluate: (1) what substances/chemicals will be injected into the aquifer; (2) are any of these substances known carcinogens; (3) in what quantities and how often will

²³ NOP at 22.

²⁴ 40 C.F.R. § 144.7; *See also* 40 C.F.R. § 146.4.

²⁵ The applicant for the aquifer exemption is “Vaquero Energy, Inc.,” which is the designated operator/representative for PetroRock. The relationship between the two companies must be clearly explained in the DEIR.

PetroRock inject into the aquifer; and (4) what testing will be done to monitor the wells for contamination from leaks or seeps?

The DEIR should also clearly state whether PetroRock previously injected into non-exempt underground sources of drinking water aquifers and whether any of those injections were not contained and leaked into the aquifer. In 2014 and 2015, the State conducted a review of approximately 50,000 Class II injection wells and identified that as many as 5,625 Class II wells had been permitted for injection into potentially non-exempt underground sources of drinking water aquifers.²⁶ Some of these illegal injection wells were discovered in Cat Canyon. The DEIR must state whether PetroRock illegally injected into a non-exempt aquifer because an illegal injection could alter the baseline water quality tests relied upon to determine if the aquifer is a source of drinking water under the federal Safe Drinking Water Act.

The DEIR must fully analyze the potential for groundwater contamination as a result of injecting directly into underground aquifers, particularly given that surrounding communities, residents, businesses, and agricultural operations depend upon clean groundwater resources. Additionally, the DEIR must discuss alternative disposal options for produced water if PetroRock's Application for aquifer exemption/expansion not be approved.

Finally, since ERG and Aera are also applying for this aquifer exemption/expansion in Cat Canyon for their respective projects, it is imperative that the cumulative water quality impacts on the aquifer from all three projects must be analyzed in detail in the DEIR.

- **The DEIR Must Disclose SWPP and Erosion Control Measures:** The DEIR must disclose surface water quality control measures, such as a proposed Storm Water Pollution Prevention Plan ("SWPPP"). This is necessary so that the public can review and comment on the adequacy of the measures and Plans before the County responds to comments on the DEIR.

Hazardous Materials / Risk of Upset

The DEIR should address the following:

- **Operator Compliance History:** The DEIR must disclose PetroRock's compliance with current and prior permits required for its oil and gas operations in order to assess whether it can abide by current safety regulations and laws. For example, Notices of Violations from the Division of Oil, Gas

²⁶ Richard Nemec, *California Orders 475 Oilfield Wastewater Wells Closed*, NGI Shale Daily, <http://www.naturalgasintel.com/articles/109111-california-orders-475-oilfield-wastewater-wells-closed> (last viewed January 19, 2017).

and Geothermal Resources (“DOGGR”) and Air Pollution Control District (“APCD”) should be disclosed in the DEIR, as well as any violations, spills and enforcement actions taken by the County, State Water Resources Control Board and any unfulfilled mitigation measures from prior permits and operations in the County.

- **The DEIR Must Disclose Potential Erosion, Transport, and Mobilization of Contaminated Soils:** The DEIR must disclose the potential impacts to public health resulting from contaminated soils being eroded and transported by wind or water into nearby creeks and drainages. See above under Surface and Groundwater.
- **The DEIR Must Disclose Impacts of Grading on Existing Contamination:** The EIR must disclose whether Project grading may increase runoff and peak flows in nearby drainages in a way that may mobilize and transport contamination such as soil contamination in upland areas or contamination into nearby creeks such as Bradley Canyon. See above under Surface and Groundwater.
- **The DEIR Must Disclose Potential Increase in Number of Fires:** The DEIR must disclose the potential for the Project to cause fires and increase the risk of fire hazards relating to fire safety. The DEIR must disclose whether recent fires in Cat Canyon, such as the 2017 Cat (or Cat Canyon) Fire, and nearby oil fields have been caused or exacerbated by oil operations.

Geologic Impacts

The DEIR should address the following:

- **The DEIR Must Disclose Increased Geological Hazards:** The DEIR must disclose and discuss the potential for increased flooding, erosion, subsidence, and seismic impacts including the potential for induced seismicity, and liquefaction. The DEIR should explore the interface between these geological impacts and existing soil and groundwater contamination in the Project vicinity. See above under Surface and Groundwater and Hazardous Materials / Risk of Upset.
- **Injection Induced Seismic Impacts Must be Disclosed:** The DEIR must disclose the increased risk of earthquakes from the Project’s proposed injections, and its contribution to the cumulative risk of increased seismic activity due to past, present, and foreseeable injections into the underlying geologic formations beneath the Cat Canyon oilfield.

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Land Use Planning and Policy Consistency

The DEIR must include an analysis of the Project's consistency with all applicable federal, state, and local laws, plans and policies, including the following:

- **The DEIR must Evaluate Consistency with Conservation Element Goals, Policies, and Recommendations:** The DEIR must assess consistency with the County Conservation Element policies and recommendations, including the recommendation regarding protecting the spadefoot toad, grading, and policies related to protecting streams and creeks, and groundwater, where applicable.

The DEIR analysis of the project's consistency with the Conservation Element's Goals and Policies must be made in light of the following Findings:

- The County recognizes that groundwater is a limited and vital resource which is renewable only if the quantity of water replenished (either naturally or artificially) equals the quantity withdrawn over time.
 - Santa Barbara County relies heavily on groundwater as a source for domestic, commercial, industrial, and agricultural uses. This is particularly true in the North County where groundwater is the only available major source of water and supports a major portion of the economy.²⁷
- **The DEIR must consider the Project's consistency with the following Groundwater Resources Section Goals and Policies:**
 - GOAL 1. To ensure adequate quality and quantity of groundwater for present and future County residents, and to eliminate prolonged overdraft of any groundwater basins.
 - GOAL 2. To improve existing groundwater quality, where feasible, and to preclude further permanent or long-term degradation in groundwater quality.
 - POLICY 2.1: Where feasible, in cooperation with local purveyors and other groundwater users, the County shall act to protect groundwater quality where quality is acceptable, improve quality where degraded, and discourage degradation of quality below acceptable levels.
 - ACTION 2.1.2: In basins or sub-basins with water quality problems, the County will encourage reduction of salt and other pollutant loading from all sources through cooperative, voluntary efforts and, where feasible, will take direct action in this regard.

²⁷ Santa Barbara County General Plan, Conservation Element, Groundwater Resources Section at 60 (May 2009).

POLICY 2.2: The County shall support the study of adverse groundwater quality effects which may be due to agricultural, domestic, environmental and industrial uses and practices.

ACTION 3.3.2: The County shall conserve waters to the extent feasible through exercise of the County's discretionary land use planning and permitting decisions, and shall promote such conservation through related public and private actions.

- **The DEIR should Evaluate Consistency with the Agricultural Element with Respect to Protecting Water Quality for Agriculture:** The Agricultural Element states that, “[m]any of the problems that threaten the viability of agriculture are caused not only by the forces of nature but by humans. Some of the major problems that confront agriculturalists include increasing urbanization and conversion of agricultural lands, water supply problems, water quality problems and soil erosion.”²⁸ Given this, the DEIR should carefully analyze the Project’s consistency with respect to groundwater threats, in light of information about petroleum contamination found in the Ontiveros family agricultural water supply well located on the Project site.
- **Disclose Consistency with Regional Transportation Plan-Sustainable Communities Plan:** The EIR should analyze and disclose any potential inconsistencies with the Regional Transportation Plan-Sustainable Communities Plan,²⁹ including any inconsistencies related to air quality and dust control mitigation measures.
- **The DEIR Should Analyze the Project’s Consistency with the County’s Climate Action Plan.**

Impacts to Air Quality

The DEIR must accurately disclose the Project’s impacts to air quality and include the following:

- **The DEIR Must Consider New Information about Leaks of Methane at Oil and Gas Facilities:** The DEIR must disclose the potential for methane leaks caused by all aspects of operations, including but not limited to: drilling, steaming, extraction, storage, and treatment of oil and gas. The DEIR should also address the effectiveness of methane monitoring, in light of recent news about methane leaks at oil and gas facilities at:

²⁸ Santa Barbara County General Plan, Agricultural Element at 26 (May 2009).

²⁹ Santa Barbara County Association of Governments, *2040 Regional Transportation Plan and Sustainable Communities Strategy* (August 15, 2013); *See also* Rincon Consultants, Inc., *2040 Santa Barbara County Regional Transportation Plan and Sustainable Communities Strategy Final Environmental Impact Report* at ES-5 (August 2013).

<https://www.reuters.com/article/us-usa-methane/u-s-oil-gas-system-methane-leaks-larger-than-epa-estimates-study-idUSKBN1JH2TP>.

- **Emissions Baseline:** The Project's baseline emissions must be established using actual throughput and not maximum permitted emissions.
- **Air Quality / GHG Impacts:** Operational impacts must be calculated based on full development of the Project's potential to emit. Cumulative impacts must be disclosed and calculated based on the entire life of the Project, including downstream and indirect impacts as well.
- **Greenhouse Gas Emissions:** The carbon footprint of PetroRock's enhanced oil recovery methods proposed in the Project must be disclosed and evaluated in the DEIR based on the entire life of the Project. The DEIR should address the climate change impacts, both incremental and cumulative, based on allowing this project to emit GHGs for the next forty or fifty years, or whenever the oil becomes uneconomical.
- **Mitigation:** The DEIR must describe feasible mitigation measures and quantify the exact amount of mitigation achieved.

Noise

The Project is located a mere five miles southeast of the City of Santa Maria and one and a half miles west of the town of Sisquoc.³⁰ The western and southern portions of the property have active cattle and grazing operations, and the eastern portion of the area has significant vineyard, farming, and grazing operations, as well as occupied residences.³¹ A diversity of wildlife are also present in the area, including nesting and migratory birds, and rare, threatened, and endangered species.³² Despite the Project's proximity to people, farms, businesses, and wildlife, a noise assessment was not even conducted as part of PetroRock's Application.³³

Nevertheless, the PetroRock NOP expressly recognizes that noise is a potentially significant impact due to the effects that noise and vibration may have on local communities, like Sisquoc and Garey, nearby schools, businesses, tourism, and wildlife. All noise-sensitive receptors should be identified in the DEIR. In addition to the NOP, impacts from noise was raised as a significant issue by a concerned North County resident during the PetroRock scoping meeting on June 18, 2018. Thus, noise and vibration must be fully analyzed in the DEIR as well as an analysis of any proposed mitigation measures. The DEIR should also include a map that demonstrates the distances between proposed drilling sites and construction of new facilities to residences, schools, farms, and businesses.

³⁰ PetroRock Oil and Gas Production Plan Application REVISED at 10 (January 2018).

³¹ *Id.* at 20.

³² NOP at 20.

³³ PetroRock Oil and Gas Production Plan Application-REVISED at 39 (January 2018).

Also, the NOP describes “*permanent* stationary noise sources” (emphasis added), but does not specifically identify these sources.³⁴ The DEIR must describe all permanent stationary noise sources, especially given that these sources could last for the life span of the Project.

Finally, the cumulative effects of noise from the ERG West Cat Canyon project, Aera East Cat Canyon project, Foxen Petroleum Pipeline, and any other reasonably foreseeable projects must be discussed and mitigated in the DEIR.

Project Alternatives

The DEIR must evaluate whether any alternatives can avoid the Class I Impact of Oil Spills. Other than the “No Project” alternative, the only alternative that would significantly decrease or eliminate Class I impacts is a renewable energy alternative. This is because oil spills are unavoidable Class I impacts.

A meaningful analysis of alternatives in the DEIR must: (1) include a renewable energy alternative; and (2) discuss the carbon footprint of each alternative and provide a comparative analysis of extracting Cat Canyon’s heavy crude using enhanced thermal recovery and acidizing in contrast to other oil fields and extraction methods in California. If the County ultimately decides not to include a renewable energy alternative in the range of potential alternatives to be analyzed in detail in the DEIR, the DEIR should describe the facts and rationale by which this rejected alternative was deemed infeasible. CEQA Guidelines § 15126.6(c).

Conclusion

Thank you for the opportunity to provide comments on the scope of the Project’s impacts and issues to be addressed in the DEIR. Please contact us if you have any questions regarding these comments.

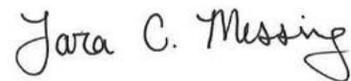
Sincerely,



Alicia Roessler
Staff Attorney



Brian Trautwein
Environmental Analyst



Tara Messing
Staff Attorney

³⁴ NOP at 21.