

**COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT**

TO: County Planning Commission
FROM: Matt Young, Planner
DATE: June 28, 2016
RE: Pacific Coast Energy Company (PCEC) Orcutt Hill Resource Enhancement Plan Project
Case Nos. 13PPP-00000-00001, 14EIR-00000-00001
APN 113-020-018

Numerous public comment letters have been submitted for this project. A letter from the Environmental Defense Center dated June 27, 2016 raised substantive comments concerning the adequacy of the Project Environmental Impact Report (EIR). The County's EIR Consultant, MRS, has addressed these comments in a memo, included as Attachment A. Other comments not focused on EIR adequacy will be addressed by staff during the hearing.

In addition, Planning and Development staff recommends a minor revision to Mitigation Measure MM GHG-1 in the project EIR (14EIR-00000-00001), and Condition No. 6 in the Conditions of Approval, included as Attachment B in the Staff Report dated April 20, 2016. Proposed changes are shown in ~~strikeout~~ and underline.

6. MM GHG-1. GHG Reporting and Reduction. The Owner/Permittee shall implement a program to quantify and reduce greenhouse gas emissions associated with construction and operations to achieve a reduction below the 1,000 metric ton CO₂-equivalent per year threshold. The standard of performance for this mitigation is a reduction of greenhouse gas emissions at a 1:1 ratio, meaning that the project must achieve an equivalent reduction for every metric tonne of greenhouse gases emitted over the applicable threshold. However, as an alternative the Owner/permittee may be required to pay a fair share mitigation fee for a hydrogen infrastructure program in the County. Measures to be implemented shall include the following:

- 1) Using high efficiency pumps and electrical devices to reduce field-wide electrical use,
- 2) Other onsite or offsite measures and/or purchased GHG offset credits, as described in the EIR, that could achieve the performance standard stated above.

A GHG Reporting and Reduction Plan shall be approved by the County, in consultation with the APCD, detailing the measures to be implemented to achieve the required reductions, updated annually, and shall include specifications on the protocol, vintage, and registry for the offsite mitigation. The following mitigation credits shall not require prior County approval:

- ~~1) Credits generated within the County per an approved County protocol;~~

~~2) Credits generated within any Santa Barbara County Air Pollution Control District protocol;~~

~~13) Credits that meet the requirements of the AB 32 Cap-and-Trade regulation protocols;~~

~~24) Credits that are generated and verified under the CAPCOA GHG Rx program;~~

~~35) Credits that are generated and verified under the voluntary SCAQMD Regulation XXVII;~~

~~46) Verified credits registered with the Climate Action Reserve or the American Carbon Registry.~~

As an alternative to mitigation Items ~~1, 2, 3, and 4, 5, and 6~~, the Owner/Permittee may be required to comply with the following mitigation requirement.

57) Payment of a GHG mitigation fee to implement a Hydrogen Infrastructure and Vehicle Program within Santa Barbara County. The fee shall be a fair share contribution calculated based on a fee study approved by the Board of Supervisors through a resolution or other appropriate action. If the Program is adopted by the Board and is identified by the Board to be a higher priority than other mitigation options, such mitigation fee shall apply in lieu of any of the above options for mitigation, with the exception of mandatory Cap and Trade mitigation.

In addition, independently verified GHG credits available through other carbon registries that follow specific protocols may be eligible for offsite mitigation, subject to review and prior approval by the County in consultation with APCD. This may include credits generated within the County per an approved County protocol or credits generated within any Santa Barbara County Air Pollution Control District protocol.

General criteria for acceptable credits include:

- Real: emission reduction must have actually occurred, as the result of a project yielding quantifiable and verifiable reductions or removals.
- Additional/Surplus: an emission reduction cannot be required by a law, rule, or other requirement.
- Quantifiable: reductions must be quantifiable through tools or tests that are reliable, based on applicable methodologies, and recorded with adequate documentation.
- Verifiable: The action taken to produce credits can be audited and there is sufficient evidence to show that the reduction occurred and was quantified correctly.
- Enforceable: An enforcement mechanism must exist to ensure that the reduction project is implemented correctly.
- Permanent: Emission reductions or removals must continue to occur for the expected life of the reduction project.

Annual GHG Emissions Reporting Requirements/Timing: The Owner/Permittee shall submit a GHG Monitoring and Reporting Plan for review and approval to the P&D, in consultation with the APCD, prior to issuance of Zoning Clearance. GHG emissions from stationary, construction, mobile sources and from water use and electrical use shall be

quantified and reported to P&D and the APCD by September 1 for the previous calendar year. Total construction emissions shall be reported to the County after construction is completed. For any emissions sources subject to the California Cap-and-Trade Regulation and the Mandatory Reporting Rule, emissions reporting to the County shall follow the same reporting format and procedures as required by those programs. **Monitoring:** The County and APCD shall review reports, the APCD will ensure compliance onsite and confirm annual reporting accuracy through the use of: 1) Cap-and-Trade reporting records; 2) Review of onsite electrical and purchased gas use and billing records; 3) Fugitive emissions estimates taken as part of the annual emissions inventory reports to the SBCAPCD combined with gas sampling reports (defining the amount of CO₂ and methane in fugitive gases); 4) Records of waste generation; and 5) Records of portable diesel engine fuel use as reported by contractors or company records.

GHG Emissions Mitigation Reporting/Timing: In addition to the annual GHG emissions reporting, the GHG emission reductions generated through Items 1 through 6 above and/or additional programs/credits/allowances, as required for CEQA mitigation, shall be quantified and reported to the County and to the APCD in the same manner as required by the Cap-and-Trade Regulation. Emission reduction credits for CEQA mitigation shall be retired following the same compliance schedule as outlined in the Cap-and-Trade Regulation, with the balance of the compliance obligation due at the end of the Cap and Trade compliance period. **Monitoring:** The County and APCD will review reports; the APCD will ensure compliance onsite and confirm annual reporting accuracy. Mitigation for GHG emissions would rely upon a reporting and reduction program that would require the Owner/Permittee to align their compliance periods with the Cap-and-Trade compliance periods. Reductions, or mitigation measures, could include a wide variety of measures, including onsite increased efficiency, to offsite programs implemented in the community, verifiable “credits” purchased on the market, and allowances purchased as part of the Cap-and-Trade program.

Attachments

Attachment A: Letter from MRS dated June 28, 2016

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Mr. Peter Cattle, Deputy Director
Planning and Development Department
Energy and Minerals Division
123 East Anapamu Street,
Santa Barbara, California 93101-2058

Re: PCEC Orcutt Hill Resource Enhancement Project FEIR EDC Comment Letter Responses

Dear Peter:

This letter provides responses to the Environmental Defense Center letter to the County dated June 27, 2016, regarding the PCEC Orcutt Hill Enhancement Plan. This letter addresses potential issues related to the FEIR and CEQA that were discussed in the EDC letter. Issues are addressed by topic below.

GHG Mitigation

There are a number of different approaches presented in the EIR and in recommended project condition GHG-1 to mitigate GHG emissions. All rely on existing, fully developed programs of proven effectiveness that allow for the use of offsets or offset-equivalent measures to mitigate GHG emissions, and is therefore not a deferral of mitigation. Participation in any of these programs would qualify as mitigation credit. For example;

- The AB-32-based Cap and Trade program has been established statewide and is used by hundreds of facilities, encompassing many millions of tons of CO₂e. (<http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>)
- The CAPCOA GHG Rx program (<http://www.capcoa.org/ghg-rx/>) and the SCAQMD Regulation XXVII (<http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xxvii>) are both well known and have been used to supply GHG mitigation credit for numerous projects to date;
- The Climate Action Reserve (<http://www.climateactionreserve.org/>), another option listed in GHG-1, issued over 1.2 million MTCO₂e of credits in 2014 to 40 clients, demonstrating that, rather than being “vague,” it is an existing, well established and well tested program.

Protocols developed by the APCD or County in the future would follow the general criteria for acceptable credits as discussed in mitigation measure GHG-1.

Importantly, the SBCAPCD specifically lists the same options and protocols listed in GHG-1 as acceptable for CEQA mitigation. Emission reduction credits as issued by air districts in the state

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are frequently used for criteria pollutant offsets, and the GHG emission reduction credit programs are based on similar criteria (i.e., real, quantifiable, surplus, enforceable, and permanent).

Air Quality: H₂S

As discussed in the risk section, section 4.4 of the EIR, H₂S "Impacts associated with the existing facilities would involve ... toxic impacts due to the presence of H₂S." (section 4.4.1.2). However, the EIR also states that, "Distances that these types of scenarios could impact would generally be less than 1,000 feet. As the closest receptors to the field are more than 1,000 feet, there would be no impacts from facility operations and acute risk levels associated with the baseline operations would be less than significant" (also section 4.4.1.2). Releases of gas containing H₂S would not reach sensitive receptors at levels above the Emergency Response Planning Guidelines (ERPG) levels (100 ppm, etc.). Therefore, the only remaining potential impacts to the public are related to odors, which are discussed in section 4.1, Air Quality. In addition, the air quality analysis included a health risk assessment, which examined health impacts of normal operational emissions, including fugitive emissions from hundreds of valves and components and pipelines, and concluded that there was no chronic or acute health impacts to the public from the emissions of H₂S.

Air Quality: Mitigation Measure AQ-3a

The PCEC permit application does not request new tankage for the facility. Rather, existing tankage would be used for the new wells and associated infrastructure for which they've applied. This mitigation measure will specifically apply as a retrofit to any existing tank that has headspace H₂S concentrations above 1,000 ppm. The intent of the mitigation measure is to limit the releases of produced gas that have high H₂S levels. The largest releases at oil and gas facilities, not including pipe breaks or accidents, are releases from tank space pressure/vacuum relief devices. Directing these devices to vapor recovery or installing a warning system that warns the operators that the tank pressure is increasing, substantially reduces the frequency of a release. Other oil fields, such as the Inglewood Oil Field in Los Angeles, utilize vapor space pressure monitoring in order to ensure that tank vapor space control systems are operating correctly to reduce the probability of a release. Routing the pressure relief system to a vapor recovery system will direct the recovered gas stream to the gas processing facility, where H₂S would be removed as part of the processing of produced gas. This is an effective technique and is included as mitigation. In terms of other sources of H₂S causing odors, fugitive leaks are smaller sources of odors and generally do not produce odors at large distances downwind.

Air Quality: Emission Factors

Table 4.1-8 in the FEIR section 4.1, Air Quality, addresses emissions associated with construction. Construction emissions are based on emission factors embedded in the CaEEMod program (<http://www.aqmd.gov/caleemod/home>) or the EMFAC program (<http://www.arb.ca.gov/emfac/>) and were used in the EIR. As no permits have yet been issued by the APCD for the new the project, emissions may be adjusted based on any new information that comes to light during that agency's permitting process.

Operation emissions (FEIR Table 4.1-9 section 4.1, Air Quality) are generally dominated by the steam generators and State-registered portable equipment. As per County policy, State-registered portable equipment is not counted towards the thresholds as it is regulated by the State. The steam generators utilize the lowest emission technology available (7-9ppm NOx) and therefore would not be available for additional emissions reductions as they already utilize BACT technology.

The Air Quality appendix details the sources of the emission factors, including those used for tanks. Tank calculations utilized the APCD tank spreadsheet in form Tank-2b.xls (<http://www.ourair.org/compliance-forms/>). Emission factors proposed by the Applicant during the permit process would become enforceable through APCD-imposed permit conditions. For example, the calculated emissions from steam generators are based on an emission factor of 7-9 ppm NOx, depending on the generator, and this performance value would become enforceable as part of the District's Authority to Construct permit.

The APCD website was accessed multiple times for general information related to monitoring stations, etc. The air quality analysis that was conducted by the Applicant was reviewed by both the APCD and the EIR preparer. Numerous comments were routed back to the Applicant and the air quality analysis was revised accordingly based on these comments.

Water Supply

The project's water use was addressed in the EIR section 4.8. Significance is determined by overdraft issues and water use thresholds, and the EIR discusses overdraft of the Santa Maria Basin in detail in section 4.8.1.2. As water use would not exceed the prescribed thresholds, impacts were determined to be less than significant.

Brine Use

Section 4.4.4.1, under Hazardous Materials, and Section 4.12, Public Services, describes the hazardous materials used, which would include demulsifier, scale inhibitor, water clarifier, corrosion inhibitor and asphaltene inhibitor. Brine is processed in order to produce clean water that is then converted to steam. Steam feed-water must be very low in dissolved solids and impurities. The chemicals used in water treatment are discussed in the EIR and would not produce an air quality or risk impact to the public.

Future Seeps

The EIR utilizes a maximum estimated seep generation of 9 seeps per year in order to access the peak year of air quality impacts. It is not anticipated that an average of 9 seeps per year would be produced. Over the last few years (2014-2016), the number of seeps has dropped to an average of 2-3 per year. The estimated number of 225 over 25 years assumes that the 9 seeps in a peak year is the average, which is incorrect. However, the future rate of seep generation is not known; hence the EIR's conclusions that impacts of seep activity produce significant and unavoidable Class I impacts related to biological habitat and water resources. The alternative of

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drilling outside of the Careaga zone would help to reduce these seep impacts, and therefore this alternative is selected as the environmentally superior alternative in the FEIR.

Biology: Bishop Pine Forest.

The comment states that the FEIR doesn't adequately analyze impacts to this habitat type. This habitat type and status are described in text on page 4.3-4, Table 4.3-2, and the loss of habitat is included in Table 4.3-5 and 4.3-6. The loss of sensitive habitats is described as Class II and requires a 3:1 replacement ratio (MM BIO-1a). The commenter questions the total acreage of impacts to this habitat; however, the final total acreage of this habitat cannot be known, only estimated, due to the uncertainty of future oil seep disturbances. MM BIO-1a, which requires a 3:1 replacement ratio for any loss of this habitat, adequately addresses impacts to this particular habitat type.

The discrepancies discussed in the comment between the Bishop pine forest (0.32 acres) in Table 4.3-5 and 4.3-6 is due to the inclusion of the mixed woodland in the total acreage for Bishop Pine forest in Table 4.3-6, making a total of 0.46 acres. This is based on the discussion in the Applicant biological assessment (Sage Institute, Seeps Biological Assessment, August 2013, page 27) which indicated that maintenance activities include impacts to Bishop Pine stands "including mixed woodland [0.14 acres]". The inclusion of mixed woodland does not change the impacts and mitigation requirements associated with the potential impacts on habitats and does not render the FEIR inadequate.

The comment also correctly states that restoration of this habitat type is uncertain (which is also stated in the FEIR). However, as described in the Applicant's Seep Can Survey results, most of the impacts to this habitat type consisted of disturbances beneath or adjacent to the tree canopy. Seep installation did remove individual trees, but most impacts entailed the removal of understory growing under the Bishop pine forest habitat canopy, therefore resulting in less long-term impacts to this habitat and quicker recovery/restoration (and consequently, justifying a 3:1 replacement ratio). The MND from the past project approval (November 8, 2006) requires a 10:1 replacement for all trees removed as a result of this work, and that those replacement trees get planted immediately prior to any additional work being conducted on site. This 10:1 mitigation requirement still stands and is in effect for impacts that occurred as a result of past activities previously approved.

Biology: Lompoc Yerba Santa Impacts

The comment states that the mitigation ratio of 3:1 for impacts to Lompoc Yerba Santa plants is inadequate. The comment is correct in stating that the FEIR recommends a 3:1 replacement ratio, whereas, the 2008 MND required a 10:1 replacement ratio. A successfully implemented restoration effort (Mitigation Measure BIO-1a) would result in a 3:1 replacement for habitat supporting sensitive plant and wildlife species. Therefore, a 3:1 ratio was used for all restoration moving forward. The 10:1 ratio was retained for previous commitments associated with the MND.

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The comment is also correct in stating there are no proven methods for propagating and restoring this species, and the FEIR states as much, and this is why the FEIR classifies this impact as Class I. The Restoration Plan required in mitigation measure (MM Bio-1a through 1c) will mitigate to the maximum extent feasible, but impacts to Lompoc Yerba Santa would still be considered Class 1.

Biology: California Tiger Salamander Population

The comment states that the FEIR describes impacts to CTS habitat as Class I but incorrectly describes impacts to CTS as Class II. The FEIR approach of describing potential impacts to this species as significant but mitigable (Class II) is described on Page 4.3-53:

“Although Project related habitat disturbances have the potential to impact individual CTS, these impacts are not expected to (1) substantially reduce or eliminate the abundance of this species in the Project area or (2) substantially limit the reproductive capacity of this population of CTS in the general area through losses of individuals or habitat. Both of these points being the basis of impact analysis for the County’s threshold of significance (County Environmental Thresholds and Guidelines, 2008, see above, Section 4.3.2). In addition, CEQA Appendix G states that a project would have a significant effect on the environment if it would “substantially affect a rare or endangered species” or “interfere substantially with the movement of any resident or migratory fish or wildlife species.”

Although the USFWS states there may be a high probability of CTS on the Project Site, this does not necessarily equate with a high probability of impact, because CTS individuals are expected to be infrequent and localized. In addition, the FEIR clearly states that the Project could result in impacts to individual CTS, but that these impacts are unlikely and infrequent, and therefore do not represent "substantial impacts to the population" or this species' "reproductive capacity" or its movement activities, which are the criteria the County would use to determine the severity of impact.

This comment also states that the FEIR should require consultation with the USFWS. The FEIR also clearly states in Section 4.3.2.1 of the Regulatory Setting the requirement for USFWS consultation if any federally listed species has the potential for “take”:

“Persons are prohibited from taking a federally listed species unless and until (1) the appropriate Section 10(a) Permit has been issued by the USFWS or (2) an Incidental Take Statement is obtained as a result of formal consultation between a Federal agency and the USFWS pursuant to Section 7 of FESA and the implementing regulations that pertain to it (50 Code of Federal Regulations [CFR] 402). The FESA defines “person” as an individual, corporation, partnership, trust, association, or any private entity; any officer, employee, agent, department or instrumental of the Federal government; any state, municipality, or political subdivision of the state; or any other entity subject to the jurisdiction of the United States.”

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Biology: California Tiger Salamander Mitigation

The comment states that the FEIR mitigation is inadequate to reduce impacts to individual CTS to less than significant. This impact's classification is based more on the unlikelihood of impact (as described above) rather than mitigating impacts to less than significant.

The comment is correct that the FEIR's proposed offsite mitigation (contribute to an existing mitigation bank) would not result in positive results for the western Los Alamos Valley metapopulation. However, the mitigation states: "If the Applicant is unable to restore the appropriate amount of habitat onsite, the approving resource agencies (County, USFWS, and the CDFW) shall have the option to require that the Applicant provide permanent protection of habitat as suitable mitigation, which could include the purchase of credits to an agency-approved conservation bank." Therefore, the first choice for this habitat restoration would require onsite restoration; second choice would be to protect habitat within the metapopulation area; and the third and last choice would be the purchase of credits, all of which would be under the review and approval of the USFWS, CDFW, and County.

Biology: Rare Plants and Animals

The comment states that approximately 14 acres of additional disturbances would result from future seep disturbances based on CDFW's estimate of 225 additional seeps. This comment is correct in stating the disturbance to sensitive resources including sensitive habitats is unquantifiable at this time due to the uncertainty of future seeps. However, the FEIR mitigation adequately mitigates this via habitat replacement at a 3:1 replacement ratio with continued oversight from county and resource agencies.

Biology: San Antonio Creek

The comment states that the FEIR does not adequately analyze impacts to resources associated with San Antonio Creek. The FEIR states on page 4.3-62:

"Any spill or rupture along either of the sections of the pipeline route would potentially impact the associated drainages. As tributaries, these drainages are part of the larger watersheds of the San Antonio Creek and Orcutt Creek and constitute navigable waters (i.e. meet Federal wetland classification criteria). Due to its location, the pipeline could reasonably be expected to discharge oil in quantities that may be harmful in or upon the navigable waters of the United States or adjoining shorelines. An event such as this could not only impact the associated habitat of the drainages but could also impact associated wildlife and plant species including listed and sensitive species."

The EIR does not indicate that an oil spill would reach the San Antonio Creek or the Orcutt Creek watersheds and impact those biological habitats. Spills from the pipeline would have to travel more than 3 miles and the spill volumes, as indicated in section 4.4, would be up to 630 bbls as a worst case. It is therefore unlikely that spills would reach San Antonio or Orcutt Creeks and therefore impacts to these biological habitats were not examined

However, MM BIO-1 requires the implementation of the Habitat Restoration Plan which would result in a 3:1 replacement ratio of all native habitats disturbed by the proposed Project including

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Federal wetlands. Implementation of procedures included in the SPCC (Mitigation Measure BIO 3), Emergency Response Action Plan (Mitigation Measure BIO-4c), including Best Management Practices, would limit the extent of significant impacts associated with an oil spill where such a spill could impact sensitive species or result in the loss of habitat for sensitive species. Any unforeseen disturbances to this sensitive habitat due to seeps would further necessitate the requirement and implementation of additional protection through a Section 404 permitting process and a Streambed Alteration Agreement with the CDFW. The proposed mitigation would reduce any potential impact to less than significant for biological impacts (Class II).

The FEIR states that the Applicant requires resource agency permitting for impacts in drainages that fall under the CDFW authority.

Proposed Project 48 Wells

The comment indicates that the 48 "replacement" wells as discussed in the project description, Section 2 of the FEIR, were not accurately described. The FEIR analyzed the impacts of wells installed on pods within the Orcutt Oil Field. The Applicant did not specify the number of wells per pod. Therefore, the analysis conducted addressed the maximum development for each pod, for example, including the maximum grading and impact levels and the maximum throughput within each pipeline. The inclusion of additional wells or replacement wells on pods was therefore already incorporated into the FEIR as the use of replacement wells would not increase production or impacts and would generate no physical changes from that analyzed in the FEIR. As per 14 Cal Code Regs §15124(c), an EIR's project description must contain a general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals, if any, and supporting public service facilities. An EIR need not contain a design-level description of the project; a conceptual description of project components is sufficient as long as the description contains sufficient detail to enable decision-makers and the public to understand the environmental impacts of the proposed project. The FEIR sufficiently provided information to allow for the determination of impacts of the project, including the 48 additional wells.

Best Regards,



Greg Chittick
Senior Engineer and Project Manager

