The purpose of this supplement is to ensure that sufficient information is provided at the application submittal stage per Section 35.52.50, Inland Area Oil Drilling and Production of the Land Use and Development Code. Specifically, Section 35.53.30.C.6, Inland Area Permit Requirements and Plan Applications, Processing, and Review. The information in this section will be used to evaluate the project's impacts and to determine the project's consistency with the Land Use and Development Code.

Please prepare a detailed project description using this suggested format as applicable:

   a) Site Plan
   b) Proposed site use
   c) Project phasing (construction, drilling, testing, operational, etc.).
   d) Equipment list
   e) Operational scenarios involving constrained usage of equipment.
   f) Disposition and transportation of produced fluids
   g) Secondary or enhanced resource recovery
   h) Hydraulic fracturing
   i) Description of injection wells
   j) Process/flow diagram
   k) Proposed road system and/or road improvements
   l) Surface owner information
   m) Measures to prohibit public access
   n) Oil spill contingency plan
   o) Name of State-designated Oilfield
   p) Hazardous materials
   q) Estimated truck trips
   r) Fugitive emissions calculations using SBCAPCD Application Form 31
   s) Handling and control of drilling mud and produced fluids
   t) Summary table of project emissions compared to County CEQA Thresholds
   u) Summary table of project construction emissions
   v) Produced oil and gas information
   w) Aquifer Exemption Status

The project description should include the following information and materials, where it is applicable to your project:

   a) A site plan which depicts the site boundaries and proposed project features.

In addition indicate on the site plans the distances from the proposed equipment to the nearest property boundaries (generally defined as the lease boundary). Indicate distances to residential buildings and business/worker buildings inside the lease and on adjacent properties. Indicate uses of adjacent properties, and discuss other surface uses inside the lease (residences, agricultural workers, etc.) and their proximity to the proposed equipment. Indicate the location of the nearest water well (drinking and irrigation) from the proposed project.
b) A description of the use, size, height, location of all proposed wells, drilling pads, production equipment, pipelines, processing equipment, ancillary structures, and limits of work areas for all phases of the project. A description of the target depth and geologic formation of proposed wells.

c) A description and schedule for all phases of the project (construction, drilling, testing, operation, etc.), including an estimate of how long the drilling rig will be located on-site (including assembly, disassembly and removal) and how long the drilling program will take. Describe any subsequent phases envisioned upon completion of the wells, such as reworking wells, acidizing wells, etc. For well completion methods involving pressure above ambient pressure, provide the fracture pressure of the reservoir/rock and the pressure of the well completion method.

d) A list of project equipment, a description of how all equipment will be powered (i.e., via grid electricity or via internal combustion engine), and a description of whether drilling rigs will be registered with the California Air Resources Board’s Portable Equipment Registration Program.

e) If the usage of any project equipment is proposed to be limited below maximum capacity, please describe in detail the method by which the equipment usage will be constrained and monitored (for example fuel metering or data logging).

f) A description of the disposition of oil, natural gas, natural gas liquids, and produced water extracted from the well(s), including mode and route of transportation.

g) A description of any secondary and enhanced recovery method (anything that enhances natural flow of production) proposed as part of this project. Identify what means you are employing; all fluids to be used as part of the secondary and enhanced recovery method; the source of the water. For secondary and enhanced recovery methods involving pressure above ambient pressure, provide the fracture pressure of the reservoir/rock and the pressure of the secondary or enhanced recovery method.

h) A description of any hydraulic fracturing on any new or existing well proposed as part of this project. Identify all fluids to be used, the source of water, upper and lower depth of groundwater where hydraulic fracturing is proposed, the fracture pressure of the reservoir/rock, depth and pressure at which hydraulic fracturing would occur, how often hydraulic fracturing would be employed. All chemicals associated with hydraulic fracturing to be used and how and where they would be stored onsite and how they would be disposed of after fracturing. Submit a copy of the Business Plan.

i) A description of any Class II Injection wells proposed. Identify targeted depth and geologic formation, and whether the targeted zone is designated exempt under the DOGGR Underground Injection Control program. If not exempt, provide water quality analysis (total dissolved solids) as required by DOGGR.

j) Attach a process flow diagram for the oil production and gas handling equipment at the site (see attached APCD example). Indicate all listed equipment on the flow diagram. Also, list any energy efficiencies incorporated into the project design.

k) A description of the proposed road system and/or road improvements that will be necessary to carry out the project. Include information on ingress, egress, road width and surface.

l) Provide name and contact information of surface owner(s). Have you informed the surface owner about this application?

m) Information on measures proposed to prohibit public access to the site during operations.

n) Oil Spill Contingency Plan.

o) Name of State Designated Oilfield.
p) A list and quantities of any hazardous materials proposed to be stored/discharged/produced or used on the property temporarily or permanently. Describe the proposed use and method of storage and disposal.

q) A description of the expected number of truck trips required to implement the proposed project (Peak and Daily Average Trip). Please include trips for: 1) Site Preparation; 2) Drilling; 3) Production; 4) Processing; and 5) Maintenance. Include trips for import of materials (blend oil, water), and export of produced oil.


s) A discussion of handling and control of drilling mud/fluids from well drilling and completion, addressing how produced gas will be controlled before the production facilities are constructed or connected to the well.

t) A summary table of operational project emissions. Include criteria pollutants and greenhouse gases, totaling the stationary, mobile, and indirect emissions (e.g., electricity usage), and compare them to the County's CEQA significance thresholds (see attached Example Operational Pollutant Summary Table). If any existing equipment (for example, tanks, pipelines, loading racks, or combustion equipment, either onsite or at other locations) is proposed to be used with the proposed project, include the incremental increase in rates and emissions caused by the project. Provide assumptions and backup calculations for all project emissions.

u) A summary table of project construction emissions. Include criteria pollutants and greenhouse gases for: construction fleet (workers), worker trips (e.g. to site and back) construction duration, assumed daily disturbance acreage, paving (if applicable), equipment fleet and associated engine types, construction vendors' trips and coating emissions (if any). Provide detailed description of assumptions and backup calculations for all emissions.

v) Indicate the expected maximum oil and gas production rates, the expected maximum Reid vapor pressure (RVP) for the crude, and provide a basis for these estimates. Provide a representative gas analysis that includes the various components expected in the gas (usually methane, CO2, and hydrogen sulfide in percent or ppm), and the maximum pressure at the well head and maximum pressure in a pipeline.

w) Does the proposed project include the injection of produced fluids into a subsurface geologic formation? If so, please indicate the geologic formation and associated aquifer and whether that aquifer into which the project proposes to inject is currently considered exempt by the US EPA. If no exemption exists for the aquifer, please indicate the status of the aquifer exemption submittal.
PROJECT GOAL

The United California, California and Bradley ("UCCB") Energy Project (Project) will increase energy supply via redevelopment of a premium, local petroleum resource which is wholly located within a State designated oil field. PetroRock, LLC is the owner of oil and gas leases over the project area while Vaquero Energy Inc. is the contract operator for PetroRock.

Californians used 232 million Btu’s of energy per capita in 2005. The Project will produce an estimated 4,000 barrels of oil per day. This is equivalent to the daily energy needs of nearly 10,000 people, roughly 2% of the population of Santa Barbara County. Benefits of locally produced energy include the following:

- Increased tax revenue for Santa Barbara County and its citizens via increased parcel valuation on the assessor’s tax roll and sales tax revenues from local purchases to support the project and local purchases made by project employees.
- Direct benefits to the local economy via job creation and increased local spending during drilling, construction and operation phases.
- Reduction of demand for imported oil and reduced risk of tanker spills.
- Increased supply of petroleum and reduction in transportation fuel prices.

(The following headers coincide with the County of Santa Barbara Oil and Gas Supplement)

4.2.1 Site Plan

An overall project plan and detailed site plans are included in Section 4 of this submittal.

The nearest wellpad (Site Z) to an occupied residence or other sensitive receptor is 1,600 feet. The nearest wellpad (Site B-3) to a lease/property line is 63 feet. The nearest wellpad to an unoccupied ag structure is 450’. The nearest wellpad to a water well used for irrigation or domestic purposes is 500’. Details of the well pads are provided in Section 2.12. Onsite and adjacent property uses consist of oil operations, vineyards and grazing which are addressed in greater detail in Section 2.6.)
4.2.2 Proposed Site Use

Each well pad will have between three (3) and fifty (50) wells, and each well will be equipped with either a conventional counter balance pumping unit or linear rod pump which will have a maximum height of 20'. The wells will be capable of either producing hydrocarbons, water (from non-fresh water aquifer) and/or injecting water or gas into US EPA approved aquifers. A summary of the proposed drilling pads is shown in Table 1 and detailed individual site plans are provided in Section 5.1. In addition to the wells and pumping units, each pad will have a pipeline manifold racks, cement pads for the gas separator and ancillary equipment and power lines/transformers. Details of proposed equipment are shown in Table 2.

The target geologic formations for the producing oil wells are the Sisquoc Sands and Monterey Shale formations, with the target depth below 2,500 feet. The target geologic formations for the water and gas injection wells are the Sisquoc and Monterey formations.

4.2.3 Project phasing

The project would be developed over several years and phases, summarized below in Table 3. See Section 3 for detail project phasing including development, drilling and operations. Note: Pipeline construction would occur to coincide with the well drilling schedule.
<table>
<thead>
<tr>
<th>Year</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1*</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 2</td>
<td>Drill 5-10 Wells Site Development Tank Facility Construction</td>
</tr>
<tr>
<td>Year 3</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 4</td>
<td>Drill 10-30 Wells Site Development Tank Facility Construction</td>
</tr>
<tr>
<td>Year 5</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 6</td>
<td>Drill 10-30 Wells Site Development</td>
</tr>
<tr>
<td>Year 7</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 8</td>
<td>Drill 10-30 Wells Site Development</td>
</tr>
<tr>
<td>Year 9</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 10</td>
<td>Drill 10-30 Wells</td>
</tr>
<tr>
<td>Year 11</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 12</td>
<td>Drill 10-30 Wells</td>
</tr>
<tr>
<td>Year 13</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 14</td>
<td>Drill 10-30 Wells</td>
</tr>
<tr>
<td>Year 15</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 16</td>
<td>Drill 10-30 Wells</td>
</tr>
<tr>
<td>Year 17</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 18</td>
<td>Drill 10-30 Wells</td>
</tr>
<tr>
<td>Year 19</td>
<td>Operations</td>
</tr>
<tr>
<td>Year 20</td>
<td>Operations</td>
</tr>
</tbody>
</table>

* From receipt of final permits

### 4.2.4 List of project equipment

See Table 2 for detailed equipment list. Note: All drilling rigs will be registered with the California Air Resources Board's Portable Equipment Registration Program.

### 4.2.5 Operational scenarios involving constrained usage of equipment

The applicant does not propose constraining equipment.

### 4.2.6 Disposition and transportation of produced fluids

Oil: The oil in the reservoir is extremely viscous and has an API gravity range between 9 and 16 degree API. High-gravity, unrefined crude oil (+/- 30 degrees API gravity) "blend oil", will be added to the oil at the surface and/or in the
individual wells to further reduce viscosity and make the oil ready for market. Oil will be transported via pipelines from the wells to the Tank Battery. Additional information on transportation is provided in Section 3.3.

Water: Water will be produced along with oil from the proposed wells. The produced water will either be 1) recycled and used for steam generation or 2) injected back into US EPA approved aquifers. Water will be transported via pipelines.

Gas: Natural gas will be produced along with oil and water from the proposed wells. Produced gas will be either 1) consumed on site, 2) sold to other parties or 3) injected into US EPA approved aquifers or 4) flared onsite. Gas will be transported via pipelines.

4.2.7 *Secondary or enhanced resource recovery*

*Cyclic Steam Process*: Due to the viscous nature of the low gravity crude oil, the applicant is proposing the wells may be steamed\(^5\). Injecting steam into the oil reservoir beneath the project site (2,500' to 4,000' below the ground surface) reduces the viscosity of the in-place oil making it easier to recover. Steaming consists of heating water in a steam generator and injecting this steam into a well for approximately ten days. The steam will then be allowed to “soak” in the well for two to seven days before being returned to production. This process would continue until all wells have been steamed, after which the cycle may be repeated. The project proposes 5 steam generators as follows: one (1) 85 MMBtu stationary, one (1) 50.0 MMBtu stationary, and three (3) 25 MMBtu portable units. The stationary steam generators will be located at the Tank Facility and Site Z and the three (3) portable units will be moved amongst the remaining pads. No wells proposed under the project will be hydraulically fractured as a means of enhancing crude oil production.

The applicant’s goal with this project is to significantly limit the effect of water resources. To do this the applicant has proposed a plan that relies predominantly on the use of recycled water.

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\(^5\) Cyclic steam operations were previously conducted on the property and are common in the Cat Canyon Oilfield
At full build out, the project may require up to 300 acre feet of water per year. The water will be comprised of a combination of recycled water and non-potable water diluted with potable water to bring the water quality to a level adequate for use in the equipment. The project proposes use of up to 100 acre feet per year of potable water from existing and/or new water wells, with the remainder being supplied by a combination of recycled non-potable water from onsite/offsite oil operations and/or water wells producing from non-potable water aquifers. A water recycling plant will be built to recycle produced water from oil operations. The majority of the water will be used for steaming operations and lesser amounts used for drilling, domestic, dust control and fire protection.

4.2.8 Hydraulic fracturing

No hydraulic fracturing is proposed as part of the project.

4.2.9 Description of Injection Wells

(Addressing Part 5.a: Oil and Gas Supplement “i” of Incomplete Letter). Two types of Class II injection wells are proposed with the project 1) Cyclic Steam Oil Production wells and 2) Waste Water Disposal Wells.

- Cyclic Steam Oil Production wells: For each well, steam will be injected for typically 7 – 10 days and then, once the well has cooled at the surface, oil will be produced (See Section 2.11).
  - Target formation: Sisquoc Formation (Pliocene). This includes the “Thomas Sand” (See Section 2.10).
  - Target depths: 2,000’ to 5,000’ measured depth.
  - The targeted zone is an oil reservoir with the CA-DOGGR Cat Canyon Oil Field (see Incomplete Response Attachment 10).
  - As per Title 40 of the United States Code of Federal Regulations Section 146 (40 CFR Section 146), the Sisquoc Formation is not a United States Drinking Water (USDW) aquifer as the Total Dissolved Solids (TDS) of the connate water is greater than 10,000 milligrams per liter (mg/L) (see Incomplete Response Exhibit A). As per US-EPA and CA-DOGGR (40 CFR Section 146.4), an aquifer exemption is needed only if the aquifer is considered USDW.
• Waste Water Disposal wells: For each well, produced water will be injected into the target formation.
  o Target formations: Sisquoc Formation (Pliocene) and Monterey (Miocene) - (See Section 2.10).
  o Target depths: 2,000’ to 7,000’ measured depth.
  o The targeted zone is an oil reservoir with the CA-DOGGR Cat Canyon Oil Field (see Incomplete Response Attachment 10).
  o As per 40 CFR Section 146, the Sisquoc and Monterey Formation are not United States Drinking Water (USDW) aquifers as the TDS of the connate water are greater than 10,000 mg/L (see Incomplete Response Exhibit A). As per US-EPA and CA-DOGGR (40 CFR Section 146.4), an aquifer exemption is needed only if the aquifer is considered USDW.

PetroRock will apply to CA-DOGGR for UIC Class II injection permits in the Sisquoc and Monterey Formations. As per Title 40 of the United States Code of Federal Regulations Section 146 (40 CFR Section 146), the threshold of aquifer water to be protected as underground sources of drinking water (USDW) is mandated to include aquifers with water with less than 10,000 milligrams per liter (mg/L) of Total Dissolved Solids (TDS). Within the UCCB project boundaries, the aquifer waters in the Sisquoc and Monterey formations have measured TDS values greater than 10,000 mg/L. In 1985, the Sisquoc Formation connate water was sampled in the United California #51 well (API #08320423) by Conoco and shown to be 12,550 mg/L TDS. Also, in 1985, the Monterey Formation connate water was sampled in the Goodwin A-41 well (API #08321753) by Conoco and shown to be 15,894 mg/L TDS (see Incomplete Response Attachment 10). Therefore, under 40 CFR Section 146.4, the Sisquoc and Monterey aquifers do not contain USDW and an aquifer exemption is not needed for these reservoirs to be considered for UIC Class II injection.

4.2.10 Process Flow Diagram
A process flow diagram for the well pads and Tank Battery are included in Section 5.1.
4.2.11 Proposed road system and/or road improvements.

Primary access to the property from the South is from Dominion Road. Secondary access to the property from the North is from Orcutt-Garey Road. Access to individual well pads will be via existing private all weather roads (remaining from previous oil operations and current ag operations). There are no proposed improvements to the public or private roads proposed as part of the project. A traffic study is provided in Section 5.3.3.

4.2.12 Surface Owner information

APN’s 129-180-018, 101-030-011

MELINDA L. MORGAN AND JOHN P. MORGAN, SUCCESSOR CO-TRUSTEES OF THE HELEN LEAFHANCOCK TRUST;
WELLS FARGO BANK, N. A., AS TRUSTEE OF THE BRENNAN COMMUNITY PROPERTY TRUSTDATED NOVEMBER 11, 2008;

UNITED CALIFORNIA BANK AND CHARLES H. CHASE, TRUSTEES OF THE ROSEMARY HANCOCK SMURR CHARITABLE TRUST ESTABLISHED UNDER THE WILL OF ROSEMARY HANCOCK SMURR;
AND

UNITED CALIFORNIA BANK AND CHARLES H. CHASE, TRUSTEES OF THE TRUST ESTABLISHED UNDER THE WILL OF ROSEMARY HANCOCK SMURR, DECEASED INTEREST.

P.O. Box 5383 Denver, CO 80217

APN 129-180-037
Rancho Ontiveros, LLC
6525 Dominion Road
Santa Mara, CA 93454

APN 129-180-038

Mark A. Ontiveros and Louise D. Ontiveros, Trustees of the Ontiveros Family Trust
Dated March 29, 2007
6525 Dominion Road
Santa Mara, CA 93454
The above surface owners have been notified and consulted with in conjunction with preparation of the application. The following surface owner has been notified, but formal agreement has not yet occurred.

APN 101-040-026

Michael Ranch
6355 Palmer Road
Santa Maria, CA 93454

4.2.13 Measures to prohibit public access.

The entirety of the project area is fenced, gated and secured.

4.2.14 Oil spill contingency plan.

An oil spill contingency plan(s) will be prepared and provided to Santa Barbara County Petroleum Department prior to issuance of permits to drill per standard County Policy.

4.2.15 Name of State-designated Oilfield

Cat Canyon Oil Field.

4.2.16 Hazardous materials.

Table 4 lists the materials that will be used during operations. Additionally, prior to operations the applicant will submit to Santa Barbara County Fire a Hazardous Materials Business Plan.

<table>
<thead>
<tr>
<th>Name</th>
<th>Use</th>
<th>Est. Container Size (gallons)</th>
<th>Est. Daily Use (gallons/day)</th>
<th>Storage Type</th>
<th>Days Material on site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emulsion Breaker</td>
<td>Separate oil from water</td>
<td>400</td>
<td>250</td>
<td>Plastic/Non-metallic drum</td>
<td>365</td>
</tr>
<tr>
<td>Flow Improver</td>
<td>Aid Fluid Flow</td>
<td>125</td>
<td>60</td>
<td>Plastic/Non-metallic drum</td>
<td>365</td>
</tr>
</tbody>
</table>
4.2.17 Estimated traffic trips

Table 5 below denotes expected traffic associated with project by development and operations. Note, the traffic counts reflect the project at full build out and therefore reflect the maximum. Please see the Traffic Study in Section 5.3.3 for additional information.

<table>
<thead>
<tr>
<th>DEVELOPMENT</th>
<th>Description</th>
<th>Peak Daily Trips</th>
<th>Non-Peak Trips</th>
<th>Total Daily Trips*</th>
<th>Distance*</th>
<th>Primary Route</th>
<th>Vehicle Type</th>
<th>Years</th>
<th>Days/year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rig Crew</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>10</td>
<td>Betteravia Road</td>
<td>Heavy/light Truck</td>
<td>Years 1-15</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>Roustabouts</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Light Truck</td>
<td>Years 1-3</td>
<td>251</td>
</tr>
<tr>
<td></td>
<td>Electricians</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Light Truck</td>
<td>Years 1-3</td>
<td>251</td>
</tr>
<tr>
<td></td>
<td>Welders</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Light Truck</td>
<td>Years 1-3</td>
<td>251</td>
</tr>
<tr>
<td></td>
<td>Other Contractors</td>
<td>20</td>
<td>20</td>
<td>40</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Light Truck</td>
<td>Years 1-3</td>
<td>251</td>
</tr>
<tr>
<td></td>
<td>Deliveries/Trucks</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>10</td>
<td>Betteravia Road</td>
<td>Heavy Truck</td>
<td>Years 1-3</td>
<td>251</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>Description</th>
<th>Peak Daily Trips</th>
<th>Non-Peak Trips</th>
<th>Total Daily Trips*</th>
<th>Distance*</th>
<th>Primary Route</th>
<th>Vehicle Type</th>
<th>Years</th>
<th>Days/year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light Crude Import</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>50</td>
<td>Betteravia Road</td>
<td>Tanker Truck</td>
<td>Year 2 &gt;&gt;&gt;</td>
<td>365</td>
</tr>
<tr>
<td></td>
<td>Crude Export</td>
<td>14</td>
<td>14</td>
<td>28</td>
<td>6</td>
<td>Betteravia Road</td>
<td>Tanker Truck</td>
<td>Year 2 &gt;&gt;&gt;</td>
<td>365</td>
</tr>
<tr>
<td></td>
<td>Contractors</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Light Truck</td>
<td>Year 2 &gt;&gt;&gt;</td>
<td>251</td>
</tr>
<tr>
<td></td>
<td>Employees</td>
<td>12</td>
<td>12</td>
<td>24</td>
<td>10</td>
<td>Clark Ave.</td>
<td>Passenger</td>
<td>Year 2 &gt;&gt;&gt;</td>
<td>251</td>
</tr>
</tbody>
</table>

* All denoted as 1 way
4.2.18 **Fugitive emissions calculations using SBCAPCD Application Form 31**

Please see attached Air Quality Evaluation provided in Section 5.3.4.

4.2.19 **Handling and control of drilling mud and produced fluids**

Drilling fluids shall be separated from the drill cuttings and trucked off site. Drill cuttings will be mixed with Solibond (a non-hazardous agent that dehydrates and solidifies drill cuttings) and either used for berm material or hauled to a landfill that accepts non-hazardous material.

Wells will be securely shut in with a well head if they are drilled and completed prior to a natural gas pipeline hookup.

4.2.20 **Summary table of project emissions compared to County CEQA Thresholds**

The applicant’s goal with this project is to limit the air quality impacts. To do this, the applicant will utilize mitigation measures such as Best Available Control Technology (BACT), electric equipment where possible, emission reduction credits and the State of California Cap-and-Trade program. BACT equipment is used, among other things, to limit oxides of Nitrogen (NOx), reactive organic compounds (ROC), and particulate matter (PM). The applicant will voluntarily designate its facility as BACT and, thus, use only Santa Barbara County Air Pollution Control District (SBCAPCD) approved combustion devices and valves. Furthermore, where possible, the applicant will install electric devices instead of combustion devices. For stationary source criteria pollutants that exceed Santa Barbara County thresholds, in accordance with SBCAPCD Rule 802, the applicant will provide emission reduction credits. For greenhouse gas emissions, the applicant will reduce the impact of these emissions through a combination of on-site/off-site reductions and the participation in the California Air Resource Board’s cap-and-trade program.

Below is a summary of the air quality impacts that the applicant proposes with this project. Table 6 includes the estimated peak-year construction emissions for the project in a 12-month period. These estimates include equipment that would be used during the construction of sites, drilling of wells and installation of production facilities. Table 7 provides estimates for operational emissions resulting from stationary source emissions and anticipated mobile source emissions.
Table 6: Maximum Mitigated Emissions for all Construction/Drilling Phases (12 month)

<table>
<thead>
<tr>
<th>Phase, Units</th>
<th>ROC</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>GHG (MTCO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction, tons/yr</td>
<td>0.62</td>
<td>6.74</td>
<td>0.01</td>
<td>3.48</td>
<td>1,021.07</td>
</tr>
<tr>
<td>Drilling, tons/yr</td>
<td>0.50</td>
<td>9.53</td>
<td>0.05</td>
<td>0.31</td>
<td>1,109.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.12</td>
<td>16.27</td>
<td>0.06</td>
<td>3.79</td>
<td>2130.07</td>
</tr>
<tr>
<td>Rule 202.D.16 Thresholds, tons/yr</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table 7: Operational Pollutant Summary Table

<table>
<thead>
<tr>
<th>Mobile Source, lbs/day</th>
<th>NOx</th>
<th>ROC</th>
<th>PM10</th>
<th>CO2e MT/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 25 lbs/day?</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>--</td>
</tr>
<tr>
<td>Stationary Source, lbs/day</td>
<td>72.73</td>
<td>61.03</td>
<td>58.10</td>
<td>129,251</td>
</tr>
<tr>
<td>Indirect GHGs from Electricity Usage MT/yr</td>
<td>2,358</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>81.30</td>
<td>63.41</td>
<td>58.34</td>
<td>132,500</td>
</tr>
<tr>
<td>ERCs (DOI No. 059), lbs/day</td>
<td>81.30</td>
<td>20.94</td>
<td>58.34</td>
<td>132,500</td>
</tr>
<tr>
<td>Project Emissions offset by the ERCs</td>
<td>55.00</td>
<td>55.00</td>
<td>80.00</td>
<td>1,000 M1/yr</td>
</tr>
<tr>
<td>County CEQA Signif. Threshold, lbs/day</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Are Project Emissions Greater than Significance Threshold</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Previously Permitted Emissions, lbs/day</td>
<td>450.94</td>
<td>309.38</td>
<td>41.72</td>
<td>136,264</td>
</tr>
<tr>
<td>Are Project Emissions below permitted historical levels (2009)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A Health Risk Assessment (HRA) was prepared as part of the project application. See Section 5.3.7 for the plan.

4.2.21 Produced oil and gas information

Expected production rates: 4,000 barrels of crude oil per day, 800 barrels of blend oil per day, 6,400 barrels of brine water per day, 5.2 million cubic feet of natural gas per day.

Maximum Reid Vapor Pressure: The maximum vapor pressers for UCCB oil is assumed to be similar to oil we produce into the Tunnell Battery. The wells at Tunnell produce oil one mile away from the UCCB property and from the same formation (Sisquoc). The oil’s vapor pressure is shown below.
Representative Gas Analysis: UCCB natural gas is assumed to be similar in composition to natural gas produced from wells in the vicinity. A sample taken from wells on nearby leases is below.