SEP 29 2010

Howard Caywood
Exaro Energy, LLC.
800 Gessner, Suite 900
Houston, Texas, 77024

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1102812

Dear Mr. Caywood:

Enclosed for your review and comment is the District's analysis of Exaro Energy, LLC.'s application for an Authority to Construct for changes to the natural gas processing facility, at Kettleman Hills, CA (NE/4 Section 30, T23S, R19E).

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Steve of Permit Services at (661) 392-5618.

Sincerely,

David Warner
Director of Permit Services

DW: sdd

Enclosures
SEP 29 2010

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1102812

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Exaro Energy, LLC.'s application for an Authority to Construct for changes to the natural gas processing facility, at Kettleman Hills, CA (NE/4 Section 30, T23S, R19E).

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Steve of Permit Services at (661) 392-5618.

Sincerely,

David Warner
Director of Permit Services

DW:sdd
Enclosure
NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Exaro Energy, LLC. for changes to the natural gas processing facility, at Kettleman Hills, CA (NE/4 Section 30, T23S, R19E).

The analysis of the regulatory basis for this proposed action, Project #C-1102812, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.
I. Proposal

Exaro Energy LLC (Exaro) is requesting Authorities to Construct (ATCs) for the modification of their 10 MMscf/day natural gas processing plant. The facility currently consists of a gas plant (ATC C-7671-1-0), an ethylene glycol dehydration unit (ATC C-7671-2-0), a methanol storage tank and injection system (ATC C-7671-3-0) with vapor control shared with permit units C-7671-11, -12, -13, and -14, six 375 hp natural gas-fired IC engines powering electrical generators (ATCs C-7671-4-0 through '-9-0), 153 MMBtu/hr flare (ATC C-7671-10-0), three 18,000 gallons natural gas liquid (NGL) storage vessels (ATCs C-7671-11-0 through '-13-0), and a NGL loading rack, two loading bays (ATC C-7671-14-0).

Exaro proposes the following changes at the facility:

Permit C-7671-1: Correct the gas plant equipment to the “as-built” configuration of two fin fan coolers, one scrubber (V-101), one filter scrubber (V-102), one cooler fan, one refrigeration unit with two heat exchanges and a JT unit.

Permit C-7671-2: Replace the ethylene glycol dehydration unit’s 1 MMBtu/hr burner with a 0.08 MMBtu/hr burner.

Permit C-7671-3: Replace the methanol injection system’s 50 BBL storage tank with a 200 gallon tank.

Permit C-7671-11: Administratively correct equipment description to list as connected to the vapor control on permit C-7671-3.

Permit C-7671-12: Administratively correct equipment description to list as connected to the vapor control on permit C-7671-3.

Permit C-7671-13: Administratively correct equipment description to list as connected to the vapor control on permit C-7671-3.
Exaro Energy LLC
C-7671, #1102812

Permit C-7671-14: Administratively correct equipment description to list as connected to the vapor control on permit C-7671-3

Permit C-7671-16: Install 49.9 MMBtu/hr flare (cancels and replaces previously approved flare ATC C-7671-10).

Permit C-7671-17: Install 145 HP Caterpillar natural gas fired engine powering a gas compressor.

Disposition of Outstanding ATCs

C-7671-1-0 will be implemented prior to or concurrently with ATC C-7671-1-1.
C-7671-2-0 will be implemented prior to or concurrently with ATC C-7671-2-0.
C-7671-3-0 will be implemented prior to or concurrently with ATC C-7671-3-1.
C-7671-11-0 will be implemented prior to or concurrently with ATC C-7671-11-1.
C-7671-12-0 will be implemented prior to or concurrently with ATC C-7671-12-1.
C-7671-13-0 will be implemented prior to or concurrently with ATC C-7671-13-1.
C-7671-14-0 will be implemented prior to or concurrently with ATC C-7671-14-1.

The project will result in an increase in greenhouse gas (GHG) emissions. However, since the project does not trigger Best Available Control Technology (BACT) and propose a less than significant health risk, the District concludes that this permitting action constitutes a ministerial approval. Additionally, the gas processed in the gas plant (potentially combusted in the flare) is currently being released to atmosphere at the associated oil production facility (C-1658). As such, the potential flaring of the gas will not result in an increase in overall Green House Gas Emissions. Since Section 21080 of the Public Resources Code exempts from the application of the California Environmental Quality Act (CEQA) projects requiring only ministerial approval, this project is not subject to either Best Performance Standards for GHG or the mitigation of carbon dioxide equivalent (CO₂e) increases. Further details are provided in the discussions of BACT (Section VIII, Rule 2201.A), the Health Risk Assessment (Section VIII, Rule 4102, subheading CH&SC 41700) and CEQA (at the end of Section VIII).

The project does not trigger BACT. Public notice will also be required. Offsets are not required.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (6/10/10)
Rule 2520 Federally Mandated Operating Permits (6/21/01) – exempt – this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source
Rule 4001 New Source Performance Standards-Subpart KKK – Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04) – exempt – facility is not a major HAPs source
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II (8/21/03) – Exempt - Glycol Reboiler < 5 MM Btu/hr
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III (10/16/08) – Exempt - Glycol Reboiler < 5 MM Btu/hr
Rule 4311 Flares (6/18/09)
Rule 4307 Boilers, Steam Generators and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr (10/16/08) – Exempt - Glycol Reboiler < 2 MM Btu/hr
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (Adopted October 16, 2008) – Exempt - Glycol Reboiler < 5.0 MM Btu/hr
Rule 4408 Glycol Dehydration Systems (12/19/02)
Rule 4409 Components At Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities (4/20/05)
Rule 4623 Storage of Organic Liquids (5/19/05)
Rule 4624 Transfer of Organic Liquid (12/20/07)
Rule 4701 Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Internal Combustion Engines – Phase 2 (1/18/07)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The natural gas processing pant is located near Kettleman, CA at NE Section 30, T23S, R19E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description (please refer to the process flow diagrams in Attachment II)

Gas received by the facility is processed by a fin fan cooler, scrubber (V-101), and a filter scrubber (V-102) before being compressed from 40 psia to 800 psia. From the compressor (powered by the new IC engine C-7671-17) the gas is piped to a second fin fan cooler, a high pressure scrubber (V-100), and is treated by the glycol dehydration system (C-7671-2). The gas then goes to the Joule Thompson (J-T) unit and the refrigeration unit skid (including two heat exchangers and a condenser). The skid is served by a methanol injection system and a 200 gallon methanol storage tank (C-7671-3) connect to the plant vapor recovery system listed on permit C-7671-14. The gas is sent to the sales gas line and the natural gas liquids (NGL) are sent to one of the three storage tanks (C-7671-11, '12, '-13) before being shipped via the loading rack (C-7671-14).

If the compressor is down the gas is diverted to the 49.9 MMbtu/hr flare (C-1771-16). The flare will be limited to a maximum of 107,640 MMBtu/year.
V. Equipment Listing

Pre-project equipment description:

C-7671-1-0: GAS PLANT INCLUDING GAS INTAKE SYSTEM, LOW TEMPERATURE SEPARATION UNIT, JT UNIT, AND STABILIZER UNIT (OR EQUIVALENT)

C-7671-2-0: ETHYLENE GLYCOL DEHYDRATION UNIT WITH 1 MMBTU/HR MAXON CORPORATION MODEL KDFERLE015NFB LOW NOX BURNER AND JATCO INC BTEX ELIMINATOR WITH FLASH VESSEL AND GLYC COL REBOILER STILL VAPORS VENTED TO PROCESS SYSTEM OR REBOILER FUEL LINE (OR EQUIVALENT)

C-7671-3-0: METHANOL INJECTION SYSTEM CONSISTING OF 50 BBL METHANOL STORAGE TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON C-1658-3-1 AND TWO ELECTRIC PUMPS

C-7671-11-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

C-7671-12-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

C-7671-13-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

C-7671-14-0: ORGANIC LIQUID LOADING FACILITY WITH CLASS I ORGANIC LIQUID LOADING RACK WITH TWO LOADING BAYS, TWO 150 HP ELECTRIC COMPRESSORS, AND VAPOR CONTROL SYSTEM VENTING TO PROCESS SYSTEM, FLARE C-7671-10, OR VAPOR CONTROL SYSTEM TRANSFER UNIT (OR EQUIVALENT)

Proposed Modification: equipment description:

C-7671-1-1: REVISE EQUIPMENT TO THE FOLLOWING -- TWO FIN FAN COOLERS, SCRUBBER (V-101), FILTER SCRUBBER (V-102), COOLER FAN, HP SCRUBBER (V-100), REFRIGERATION UNIT WITH TWO HEAT EXCHANGERS AND A CONDENSER, AND A JT UNIT

Electrical HP (calculated for billing purposes):

<table>
<thead>
<tr>
<th>Equipment</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Pressure Fin Fan</td>
<td>40</td>
</tr>
<tr>
<td>Low Pressure Fin Fan</td>
<td>30</td>
</tr>
<tr>
<td>Vapor Recovery Compressor</td>
<td>15</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>10</td>
</tr>
<tr>
<td>Back Up Air Compressor</td>
<td>10</td>
</tr>
<tr>
<td>Waste Water Pump</td>
<td>15</td>
</tr>
<tr>
<td>Total HP ('-1-1)</td>
<td>120</td>
</tr>
</tbody>
</table>
C-7671-2-1: REVISE BURNER RATING TO 0.08 MMBTU/HR

C-7671-3-1: REPLACE METHANOL STORAGE TANK WITH A 200 GALLON METHANOL STORAGE TANK AND LIST PERMIT UNITS C-7671-11, '12, '13, 'AND -14 AS CONNECTED TO THE SHARED VAPOR CONTROL SYSTEM

C-7671-11-0: LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-12-0: LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-13-0: LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-14-0: LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

Equipment to be canceled:

C-7671-10-0: 153 MMBTU/HR CEB MODEL 4500 ENCLOSED PROCESS FLARE (OR EQUIVALENT)

Post-project equipment description:

C-7671-1-1: GAS PLANT INCLUDING TWO FIN FAN COOLERS, SCRUBBER (V-101), FILTER SCRUBBER (V-102), COOLER FAN, HP SCRUBBER (V-100), REFRIGERATION UNIT WITH TWO HEAT EXCHANGERS AND A CONDENSER, AND A JT UNIT

C-7671-2-1: ETHYLENE GLYCOL DEHYDRATION UNIT WITH 0.08 MMBTU/HR MAXON CORPORATION MODEL KDZERLE015NFB LOW NOX BURNER AND JATCO INC BTEX ELIMINATOR WITH FLASH VESSEL AND GLYCOL REBOILER STILL VAPORS VENTED TO PROCESS SYSTEM OR REBOILER FUEL LINE

C-7671-3-1: METHANOL INJECTION SYSTEM INCLUDING TWO ELECTRIC PUMPS AND A 200 GALLON METHANOL STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM SHARED WITH PERMIT UNITS C-7671-11, '12, '13, 'AND -14

C-7671-11-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-12-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-13-0: 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3
C-7671-14-0: ORGANIC LIQUID LOADING FACILITY WITH CLASS I ORGANIC LIQUID LOADING RACK WITH TWO LOADING BAYS, TWO 150 HP ELECTRIC COMPRESSORS VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

C-7671-16-0: 49.9 MMBTU/HR KANE MODEL KHE 7000 COANDA EFFECT FLARE

C-7671-17-0: 145 BHP CATERPILLAR, MODEL 3306, NATURAL GAS FIRED INTERNAL COMBUSTION ENGINE EQUIPPED WITH A 3-WAY CATALYST POWERING A COMPRESSOR

VI. Emission Control Technology Evaluation

Leaks exceeding 10,000 ppmv are a violation of the facility permits and must be repaired promptly and diligently as required by a fugitive emissions components I&M Program. With the "no leak" permit condition and I&M program, the VCS is expected to have a control efficiency of 99%.

C-7671-3 Methanol Storage Tank
The methanol storage tank vents to vapor shared control system. The vapor control efficiency is 99% (flare C-7671-16 or sales gas pipeline).

C-7671-11 through '13 NGL Storage Tanks & C-7671-14 Liquid Transfer Facility
The units will vent to a shared vapor control system listed on permit C-7671-3. The vapor control efficiency is expected to be 99%.

C-7671-16 49.9 MMBtu/hr flare:
The proposed flare is a 49.9 MM Btu/hr Kane linear 4” Multi-nozzle Coanda effect. The flare will serve as a vapor control device for the gas plant (C-7671-1), the Glycol Dehydration unit (C-7671-2), the methanol injection system (C-7671-3), NGL tanks (C-7671-11 through '13) and vapors from liquid transfer facility (C-7671-14) and thus the gas is expected to contain C3 and higher constituents. The combustion efficiency is expected to be 99.99%.

C-7671-17
The natural gas-fired engine is equipped with:
[x] Non-Selective Catalytic Reduction

Non-Selective Catalytic Reduction (NSCR) decreases NOx, CO and VOC emissions by using a catalyst to promote the chemical reduction of NOx into N2 and O2, and the chemical oxidation of VOC and CO into H2O and CO2.

VII. General Calculations

A. Assumptions
Facility operate 24 hr/day 365 days per year
Glycol reboiler gas heating value: 1500 Btu/scf (project C7671, 1082918)
IC engine gas heating value: 1500 Btul/scf (project C7671, 1082918)
Flare gas heating value: 2000 Btul/scf (project C7671, 1082918)
Flare maximum hourly and daily heat inputs: 49.9 MMBtu/hr or 3672 MMBtu/day
(0.02495 MMscf/hr, 0.5988 MMscf/day with 2000 Btul/scf gas)
Flare maximum annual heat input: 107,640 MMBtu/yr (53.82 MMscf/yr with 2000 Btul/scf gas)
IC engine efficiency, 30%
F factor, 8578 ds cf @ 0% O_2 (60 deg F)/MMBtu
Sulfur content of gas combusted in flare, IC engines, and glycol reboiler: 1.0 gr S/scf
(project C7671, 1082918)

B. Emission Factors

C-7671-1, '-2 '-3, '-11, '-12, '-13, '-14 and '-16

For this project fugitive emissions will be calculated as specified in “California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities”. The < 10,000 ppmv screening value ranges emissions factors are used. The emission calculations are included in Attachment IV.

C-7671-2 - Glycol Reboiler

<table>
<thead>
<tr>
<th>Emissions Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollutant</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>NO_X</td>
</tr>
<tr>
<td>SO_X</td>
</tr>
<tr>
<td>PM_{10}</td>
</tr>
<tr>
<td>CO</td>
</tr>
<tr>
<td>VOC</td>
</tr>
</tbody>
</table>

* 7.6 lb PM\text{10}/10^6 scf x scf/0.001020 MMBtu x 1500/1020 = 0.011 lb PM\text{10}/MMBtu
84 lb CO/10^6 scf x scf/0.001020 MMBtu x 1500/1020 = 0.121 lb CO/MMBtu
5.5 lb VOC/10^6 scf x scf/0.001020 MMBtu x 1500/1020 = 0.008 lb VOC/MMBtu
1.0 gr/ S100 scf x lb S/7000 gr x scf/1500 Btu x 10^5 Btu/MMBtu x 2 SO_2/S = 0.0019 lb SO_2/MMBtu
### Natural Gas-Fired IC Engine Emission Factors

<table>
<thead>
<tr>
<th></th>
<th>ppmvd</th>
<th>g/hp·hr</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>9</td>
<td>0.128</td>
<td>Manufactures Guarantee</td>
</tr>
<tr>
<td>SOX</td>
<td>0.00732</td>
<td>1.0 gr S/100 scf, 1500 Btu/scf</td>
<td>EPA, AP42 5th Ed., Table 3.2-3</td>
</tr>
<tr>
<td>PM10</td>
<td>0.052</td>
<td>5.14</td>
<td>BACT Guideline 3.3.12</td>
</tr>
<tr>
<td>CO</td>
<td>600</td>
<td>0.12</td>
<td>BACT Guideline 3.3.12</td>
</tr>
<tr>
<td>VOC</td>
<td>25</td>
<td>0.12</td>
<td></td>
</tr>
</tbody>
</table>

**NOx:** 9 ppmvd @ 15% O2

\[
(9 \text{ ft}^3 \text{ NOx}/10^6 \text{ ft}^3 \text{ gas@15\%O}_2) \times (20.9/(20.9-15)\text{ ft}^3 \text{ gas@15\%O}_2/\text{ ft}^3 \text{ gas@0\%O}_2) \times (8578 \text{ scf} @ 0\% \text{ O}_2/10^6 \text{ Btu}) \times (2542.5 \text{ Btu/hp-hr})/(1.0/0.30) /[(379 \text{ scf/lbmol})(lbmol/46 lb)/(1/453.6 g/lb)]
\]

= 0.128 g/bhp hr

**CO:** 600 ppmvd @ 15% O2

\[
(6000 \text{ ft}^3 \text{ CO}/10^6 \text{ ft}^3 \text{ gas@15\%O}_2) \times (20.9/(20.9-15)\text{ ft}^3 \text{ gas@15\%O}_2/\text{ ft}^3 \text{ gas@0\%O}_2) \times (8578 \text{ scf} @ 0\% \text{ O}_2/10^6 \text{ Btu}) \times (2542.5 \text{ Btu/hp-hr})/(1.0/0.30)/[(379 \text{ scf/lbmol})(lbmol/28 lb)/(1/453.6 g/lb)]
\]

= 5.14 g/bhp hr

**VOC:** 25 ppmvd @ 15% O2

\[
(25 \text{ ft}^3 \text{ NOx}/10^6 \text{ ft}^3 \text{ gas@15\%O}_2) \times (20.9/(20.9-15)\text{ ft}^3 \text{ gas@15\%O}_2/\text{ ft}^3 \text{ gas@0\%O}_2) \times (8578 \text{ scf} @ 0\% \text{ O}_2/10^6 \text{ Btu}) \times (2542.5 \text{ Btu/hp-hr})/(1.0/0.30)/[(379 \text{ scf/lbmol})(lbmol/16 lb)/(1/453.6 g/lb)]
\]

= 0.12 g/bhp

**SOX** is calculated as follows:

\[
1.0 \text{ gr/ S100 scf x lb S}/7000 \text{ gr x scf/1500 Btu x 2 SO2/S x 2542.5 Btu/bhp-hr x 1 bhp in/0.3 bhpout x 453.6 g/lb}
\]

= 0.00732 lb SO2/MBBtu

**PM10** is calculated as follows:

\[
3000 \text{ scf/hr (max fuel consumption per supplemental application form)} \times 0.0015 \text{ MMBtu/scf} \times 0.0095 \text{ lb/MBBtu (fuel input, AP-42)} \times 453.6 \text{ g/lb} \times 1/375 \text{ hp}
\]

= 0.052 g PM10/hp-hr
Flare (C-7671-16-0)

Pilot and produced gas* flare emission factors are:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>0.036</td>
<td>FYI-83/AP-42 Section 13.5 Emissions Factors</td>
</tr>
<tr>
<td>SO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>0.00143</td>
<td>1.0 gr-S/100 scf 2000 Btu/scf</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.008</td>
<td>FYI-83/AP-42 Section 13.5 Emissions Factors</td>
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<tr>
<td>CO</td>
<td>0.370</td>
<td>FYI-83/AP-42 Section 13.5 Emissions Factors</td>
</tr>
<tr>
<td>VOC</td>
<td>0.063</td>
<td>FYI-83/AP-42 Section 13.5 Emissions Factors</td>
</tr>
</tbody>
</table>

\[1.0 \text{ gr-S/100 scf} \times \text{lb/}7000 \text{ gr x scf/2000 Btu} \times 10^{9} \text{ Btu/MMBtu} \times 2 \text{ SO}_2/\text{S} = 0.00143 \text{ lb SO}_2/\text{MMBtu}

C. Calculations

1. Pre-Project Potential to Emit, (PE<sub>1</sub>)

Since flare S-7671-16 and Engine S-7671-17 are new emissions units, PE<sub>1</sub> = 0 for all pollutants.
Permit C-7671-1-0

Fugitive Emissions from Project C7671, 1082918:

<table>
<thead>
<tr>
<th>Description</th>
<th>Daily PE2 (lb/day)</th>
<th>Annual PE2 (lb/year)</th>
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</thead>
<tbody>
<tr>
<td>V-109</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>V-100</td>
<td>0.5</td>
<td>183</td>
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<tr>
<td>V-101</td>
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<tr>
<td>E-100</td>
<td>0.2</td>
<td>73</td>
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<tr>
<td>E-XXX Water chiller</td>
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<tr>
<td>E-110, P-100, K-101</td>
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<td>0</td>
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<tr>
<td>V-101</td>
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<td>73</td>
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<td>73</td>
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<td>E-101B</td>
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</tr>
<tr>
<td>E-102</td>
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<td>110</td>
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<td>73</td>
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<tr>
<td>V-104</td>
<td>0.2</td>
<td>73</td>
</tr>
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<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>E-106</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>C-101</td>
<td>0.8</td>
<td>292</td>
</tr>
<tr>
<td>V-100</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>E-100</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>H-100</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>V-103</td>
<td>0.5</td>
<td>183</td>
</tr>
<tr>
<td>V-200</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>E-104</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>E-105</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>AC-200</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>C-200</td>
<td>0.4</td>
<td>146</td>
</tr>
<tr>
<td><strong>Total C-7671-1</strong></td>
<td><strong>6.0</strong></td>
<td><strong>2192</strong></td>
</tr>
</tbody>
</table>
Permit C-7671-2-0

Fugitive Emissions from Project C7671, 1082918:

<table>
<thead>
<tr>
<th>Description</th>
<th>Daily PE2 (lb/day)</th>
<th>Annual PE2 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-106</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>F-102</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>F-103</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>P-101A</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P-101B</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P-102</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dehy burner</td>
<td>0.4</td>
<td>146</td>
</tr>
<tr>
<td>BTEX heat exchanger</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>BTEX separator</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total C-7671-2</strong></td>
<td><strong>1.1</strong></td>
<td><strong>403</strong></td>
</tr>
</tbody>
</table>

Burner Emissions:

C-7671-2-0 – Glycol reboiler

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MMBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/day)</th>
<th>Daily PE2 (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.036</td>
<td>1</td>
<td>24</td>
<td>0.9</td>
</tr>
<tr>
<td>SOx</td>
<td>0.0019</td>
<td>1</td>
<td>24</td>
<td>0.0</td>
</tr>
<tr>
<td>PM10</td>
<td>0.011</td>
<td>1</td>
<td>24</td>
<td>0.3</td>
</tr>
<tr>
<td>CO</td>
<td>0.121</td>
<td>1</td>
<td>24</td>
<td>2.9</td>
</tr>
<tr>
<td>VOC</td>
<td>0.008</td>
<td>1</td>
<td>24</td>
<td>0.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MMBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/year)</th>
<th>Annual PE2 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.036</td>
<td>1</td>
<td>8,760</td>
<td>315</td>
</tr>
<tr>
<td>SOx</td>
<td>0.00190</td>
<td>1</td>
<td>8,760</td>
<td>17</td>
</tr>
<tr>
<td>PM10</td>
<td>0.0110</td>
<td>1</td>
<td>8,760</td>
<td>96</td>
</tr>
<tr>
<td>CO</td>
<td>0.121</td>
<td>1</td>
<td>8,760</td>
<td>1,060</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0080</td>
<td>1</td>
<td>8,760</td>
<td>70</td>
</tr>
</tbody>
</table>
Total Emissions C-7671-2-0:

<table>
<thead>
<tr>
<th>Pre Project Potential to Emit (PEI)</th>
<th>Daily Emissions (lb/day)</th>
<th>Annual Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0.9</td>
<td>315</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0.0</td>
<td>17</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.3</td>
<td>96</td>
</tr>
<tr>
<td>CO</td>
<td>2.9</td>
<td>1,060</td>
</tr>
<tr>
<td>VOC</td>
<td>(0.2 + 1.1 = 1.3)</td>
<td>(70 + 403 = 473)</td>
</tr>
</tbody>
</table>

Permit C-7671-3-0
Fugitive Emissions from Project C7671, 1082918:

<table>
<thead>
<tr>
<th>C-7671-3-0 – Methanol Storage and Injection</th>
<th>Daily PEI (lb/day)</th>
<th>Annual PEI (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol injection</td>
<td>0.4</td>
<td>146</td>
</tr>
<tr>
<td>Pump and piping</td>
<td>0.3</td>
<td>110</td>
</tr>
<tr>
<td>Storage tank</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>Drain tank</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total C-7671-3</strong></td>
<td><strong>1.0</strong></td>
<td><strong>367</strong></td>
</tr>
</tbody>
</table>

Permit C-7671-11-0, '12-0, and '13-0
Fugitive Emissions from Project C7671, 1082918:

<table>
<thead>
<tr>
<th>C-7671-11-0, '12-0, and '13-0 – NGL Storage</th>
<th>Daily PEI (lb/day)</th>
<th>Annual PEI (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (per tank)</strong></td>
<td><strong>0.5</strong></td>
<td><strong>548</strong></td>
</tr>
</tbody>
</table>
Permit C-7671-14-0
Fugitive Emissions from Project C7671, 1082918:

<table>
<thead>
<tr>
<th>Description</th>
<th>Daily PE1 (lb/day)</th>
<th>Annual PE1 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGL Bay-1</td>
<td>0.5</td>
<td>183</td>
</tr>
<tr>
<td>NGL Bay-2</td>
<td>0.5</td>
<td>183</td>
</tr>
<tr>
<td>Transfer Bay-1</td>
<td>0.3</td>
<td>110</td>
</tr>
<tr>
<td>Transfer Bay-2</td>
<td>0.3</td>
<td>110</td>
</tr>
<tr>
<td>Compressor</td>
<td>0.8</td>
<td>292</td>
</tr>
<tr>
<td>Compressor</td>
<td>0.8</td>
<td>292</td>
</tr>
<tr>
<td><strong>Total C-7671-3</strong></td>
<td><strong>3.2</strong></td>
<td><strong>1170</strong></td>
</tr>
</tbody>
</table>

2. Post Project Potential to Emit, (PE2)

Permit C-7671-1-1
Fugitive Emissions

<table>
<thead>
<tr>
<th>Description</th>
<th>Daily PE2 (lb/day)</th>
<th>Annual PE2 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin fan #1</td>
<td>0.3</td>
<td>110</td>
</tr>
<tr>
<td>V-101</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>V-102</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>FIN Fan #2</td>
<td>0.3</td>
<td>110</td>
</tr>
<tr>
<td>V-100</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>J-T Unit</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>Refrigeration Unit</td>
<td>0.2</td>
<td>73</td>
</tr>
<tr>
<td>Condenser</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>Heat exchanger #1</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td>Heat exchanger #2</td>
<td>0.1</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total gas Plant (C-7671-1-1)</strong></td>
<td><strong>1.5</strong></td>
<td><strong>552</strong></td>
</tr>
</tbody>
</table>

Permit C-7671-2-1 – Glycol reboiler

There is no change in the proposed fugitive components associated with glycol reboiler. PE2 for fugitive emissions is listed below:

\[
PE2 = PE1 = 1.1 \text{ lb/day and 403 lb/year}
\]
Burner Emissions:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Daily PE1</th>
<th>Annual PE1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EF2 (lb/MMBtu)</td>
<td>Heat Input (MMBtu/hr)</td>
</tr>
<tr>
<td>NOₓ</td>
<td>0.036</td>
<td>0.08</td>
</tr>
<tr>
<td>SOₓ</td>
<td>0.0019</td>
<td>0.08</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>0.011</td>
<td>0.08</td>
</tr>
<tr>
<td>CO</td>
<td>0.121</td>
<td>0.08</td>
</tr>
<tr>
<td>VOC</td>
<td>0.008</td>
<td>0.08</td>
</tr>
</tbody>
</table>

C-7671-2-1: Glycol Reboiler:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Post Project Potential to Emit (PE1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daily Emissions (lb/day)</td>
</tr>
<tr>
<td>NOₓ</td>
<td>0.1</td>
</tr>
<tr>
<td>SOₓ</td>
<td>0.0</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>0.0</td>
</tr>
<tr>
<td>CO</td>
<td>0.2</td>
</tr>
<tr>
<td>VOC*</td>
<td>0.0 + 1.1 = 1.1</td>
</tr>
</tbody>
</table>

* fugitive emissions + burner emissions

Permit C-7671-3-1 Methanol Storage and Injection:

There is no change in the proposed fugitive components associated with methanol storage and injection system. PE2 for fugitive emissions is listed below:

\[
\text{PE2} = \text{PE1} = 1.0 \text{ lb/d} \text{ and 367 lb/year}
\]

Permit C-7671-11-0, '-12-0, and '-13-0 – NGL Storage

There is no change in the proposed fugitive components associated with natural gasoline storage tanks. PE2 for fugitive emissions for each tank is listed below:
PE2 = PE1 = 0.5 lb/day and 183 lb/year

**Permit C-7671-14-0 Organic Liquid Loading and Vapor Control System Transfer Unit**

There is no change in the proposed fugitive components associated with organic liquid loading and vapor control system transfer unit. PE2 for fugitive emissions for each tank is listed below:

PE2 = PE1 = 3.2 lb/day and 1170 lb/year

**Flare C-7671-16-0**

**Fugitive Emissions:**

Applicant states that the new flare will have the same number and type of fugitive components as the flare it's replacing (C-7671-10); there, the new flares potential to emit is the same as flare C-7671-10 and PE2 for fugitive emissions (from Project C-1082918) is listed below:

PE2 = 0.4 lb/day and 146 lb/year

**Flare Emissions:**

- NOx: \((0.036 \text{ lbs/MBT}) \times (1,197.6 \text{ MBT/day}) = 43.1 \text{ lb/day}\)
- SOx: \((0.00143 \text{ lb/MBT}) \times (1,197.6 \text{ MBT/day}) = 1.7 \text{ lb/day}\)
- PM10: \((0.008 \text{ lb/MBT}) \times (1,197.6 \text{ MBT/day}) = 9.6 \text{ lb/day}\)
- CO: \((0.370 \text{ lb/MBT}) \times (1,197.6 \text{ MBT/day}) = 443.1 \text{ lb/day}\)
- VOC: \((0.063 \text{ lb/MBT}) \times (1,197.6 \text{ MBT/day}) = 75.4 \text{ lb/day}\)

- NOx: \((0.036 \text{ lbs/MBT}) \times (107,640 \text{ MBT/yr}) = 3,875 \text{ lb/yr}\)
- SOx: \((0.00143 \text{ lb/MBT}) \times (107,640 \text{ MBT/yr}) = 154 \text{ lb/yr}\)
- PM10: \((0.008 \text{ lb/MBT}) \times (107,640 \text{ MBT/yr}) = 861 \text{ lb/yr}\)
- CO: \((0.370 \text{ lb/MBT}) \times (107,640 \text{ MBT/yr}) = 39,826 \text{ lb/yr}\)
- VOC: \((0.063 \text{ lb/MBT}) \times (107,640 \text{ MBT/yr}) = 6781 \text{ lb/yr}\)

**C-7671-16-0**

<table>
<thead>
<tr>
<th>Post Project Potential to Emit (PE2)</th>
<th>Daily Emissions (lb/day)</th>
<th>Annual Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>43.1</td>
<td>3,875</td>
</tr>
<tr>
<td>SOx</td>
<td>1.7</td>
<td>154</td>
</tr>
<tr>
<td>PM10</td>
<td>9.6</td>
<td>861</td>
</tr>
<tr>
<td>CO</td>
<td>443.1</td>
<td>39,826</td>
</tr>
<tr>
<td>VOC*</td>
<td>75.4 + 0.4 = 75.8</td>
<td>6781 + 146 = 6,927</td>
</tr>
</tbody>
</table>

* flame emissions + fugitive emissions
C-7671-17-0: IC engine

### Daily Post Project Emissions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emissions Factor (g/bhp-hr)</th>
<th>Rating (bhp)</th>
<th>Daily Hours of Operation (hrs/day)</th>
<th>Conversion (g/lb)</th>
<th>PE2 Total (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0.071</td>
<td>145</td>
<td>24</td>
<td>453.6</td>
<td>0.5</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0.00732</td>
<td>145</td>
<td>24</td>
<td>453.6</td>
<td>0.1</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.052</td>
<td>145</td>
<td>24</td>
<td>453.6</td>
<td>0.4</td>
</tr>
<tr>
<td>CO</td>
<td>0.6</td>
<td>145</td>
<td>24</td>
<td>453.6</td>
<td>4.5</td>
</tr>
<tr>
<td>VOC</td>
<td>0.15</td>
<td>145</td>
<td>24</td>
<td>453.6</td>
<td>1.2</td>
</tr>
</tbody>
</table>

### Annual Post Project Emissions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emissions Factor (g/bhp-hr)</th>
<th>Rating (bhp)</th>
<th>Annual Hours of Operation (hrs/yr)</th>
<th>Conversion (g/lb)</th>
<th>PE2 Total (lb/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0.071</td>
<td>145</td>
<td>8760</td>
<td>453.6</td>
<td>199</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0.00732</td>
<td>145</td>
<td>8760</td>
<td>453.6</td>
<td>20</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.052</td>
<td>145</td>
<td>8760</td>
<td>453.6</td>
<td>146</td>
</tr>
<tr>
<td>CO</td>
<td>0.6</td>
<td>145</td>
<td>8760</td>
<td>453.6</td>
<td>1680</td>
</tr>
<tr>
<td>VOC</td>
<td>0.15</td>
<td>145</td>
<td>8760</td>
<td>453.6</td>
<td>420</td>
</tr>
</tbody>
</table>

3. **Pre-Project Stationary Source Potential to Emit (SSPE1)**

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.
4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.
5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, “for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.”

As seen in the table above, the facility is an existing Major Source for VOC; however, it is not a Major Source as a result of this project.
6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required.

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

As stated above; clarifying the equipment description in not a modification as define in Rule 2201; therefore, BE calculations are not required for permit units C-7671-11, '-'-12, '-'-13, and '-'-14.

Permit Units S-7671-15 and '-'-16 are new emissions units; therefore, for both units BE = 0 lbs/year for all criteria pollutants.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant; therefore Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1). As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

<table>
<thead>
<tr>
<th>Baseline Emissions [BE] (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
</tr>
<tr>
<td>C-7671-1-0</td>
</tr>
<tr>
<td>C-7671-2-0</td>
</tr>
<tr>
<td>C-7671-3-0</td>
</tr>
</tbody>
</table>

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

As discussed in Section VII.C.5 above, the facility is not a Major Source for any pollutant; therefore, the project does not constitute a Major Modification.

8. Federal Major Modification

As shown above, this facility is not a Major Source. Therefore, in accordance with District Rule 2201, Section 3.17, this project does not constitute a Federal Major Modification and no further discussion is required.
9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included below.

C-7671-1 (VOC only):

PE2 = 552 lb/yr, PE1= 2192 lb/yr
QNEC = -410 lb/qtr

C-7671-2
Glycol dehydration unit

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/yr)</th>
<th>BE (lb/yr)</th>
<th>QNEC (lb/qtr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>25</td>
<td>315</td>
<td>-73</td>
</tr>
<tr>
<td>SOx</td>
<td>1</td>
<td>17</td>
<td>-4</td>
</tr>
<tr>
<td>PM10</td>
<td>8</td>
<td>96</td>
<td>-22</td>
</tr>
<tr>
<td>CO</td>
<td>85</td>
<td>1,060</td>
<td>-244</td>
</tr>
<tr>
<td>VOC</td>
<td>409</td>
<td>473</td>
<td>-16</td>
</tr>
</tbody>
</table>

C-7671-3 Methanol Storage and Injection (VOC Only)

PE2 = 367 lb/yr, PE1= 367 lb/yr
QNEC = 0 lb/qtr

C-7671-11, '-12, and '-13 storage tanks (VOC only):

PE2 = 183 lb/yr, PE1= 183 lb/yr
QNEC = 0 lb/qtr

C-7671-14-0 Loading Rack (VOC only):

PE2 = 1170 lb/yr, PE1= 1170 lb/yr
QNEC = 0 lb/qtr
C-7671-16-0 Flare:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/yr)</th>
<th>BE (lb/yr)</th>
<th>QNEC (lb/qtr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>7183</td>
<td>0</td>
<td>1796</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>154</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>861</td>
<td>0</td>
<td>215</td>
</tr>
<tr>
<td>CO</td>
<td>39,826</td>
<td>0</td>
<td>9956</td>
</tr>
<tr>
<td>VOC</td>
<td>6,927</td>
<td>0</td>
<td>1732</td>
</tr>
</tbody>
</table>

C-7671-17 -- IC Engine:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/yr)</th>
<th>BE (lb/yr)</th>
<th>QNEC (lb/qtr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>199</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>20</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>146</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>CO</td>
<td>1680</td>
<td>0</td>
<td>420</td>
</tr>
<tr>
<td>VOC</td>
<td>420</td>
<td>0</td>
<td>105</td>
</tr>
</tbody>
</table>

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

The proposed modification of permit units C-7671-11, '-12, '-13, and '-14 do not meet the following criteria for a Modification, as defined in Section 3.24, and are therefore not subject to this rule.

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- Addition of any new emissions unit which is subject to District permitting requirements.
• A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Therefore, BACT and offset calculations are not required for permit units C-7671-11, '-12, '-13, and '-14.

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in a SB 288 Major Modification or a Federal Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

C-7671-16:

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new flare with a PE greater than 2 lb/day for NOx, PM10, CO, and VOC. However the flare will serve as a vapor control device for the facility and therefore is not subject to BACT.

C-7671-17 – IC engine
As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new natural gas fired engine with a PE greater than 2 lb/day for CO. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 of this document.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered for the relocation of an emissions unit.

c. Modification of emissions units – AIPE > 2 lb/day

AIPE = PE2 – HAPE
Where,
AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,
PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

C-7671-1-1:
Gas Plant:
Fugitive VOC Emissions EF1 = EF2
AIPE = 1.5 lb/day – (6.0 * 1) lb/day
= -4.5 lb/day

C-7671-2-1:
Glycol Reboiler:
Fugitive VOC Emissions EF1 = EF2
AIPE = 1.1 lb/day – (1.1 * 1) lb/day
= 0.0 lb/day

Burner:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE1</th>
<th>EF1</th>
<th>PE2</th>
<th>EF2</th>
<th>AIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.9</td>
<td>0.036</td>
<td>0.1</td>
<td>0.036</td>
<td>-0.8</td>
</tr>
<tr>
<td>SOx</td>
<td>0.0</td>
<td>0.0019</td>
<td>0.0</td>
<td>0.0019</td>
<td>0</td>
</tr>
<tr>
<td>PM10</td>
<td>0.3</td>
<td>0.011</td>
<td>0.0</td>
<td>0.011</td>
<td>-0.3</td>
</tr>
<tr>
<td>CO</td>
<td>2.9</td>
<td>0.121</td>
<td>0.2</td>
<td>0.121</td>
<td>-2.7</td>
</tr>
<tr>
<td>VOC</td>
<td>0.9</td>
<td>0.008</td>
<td>0.0</td>
<td>0.008</td>
<td>-0.9</td>
</tr>
</tbody>
</table>

C-7671-3-1
Methanol Storage and Injection
Fugitive VOC Emissions EF1 = EF2

EF1 = EF2
AIPE = 1.0 lb/day – (1.0 * 1) lb/day
= -0.0 lb/day
BACT is not triggered for the modification of an emissions unit.

d. Major Modification

As discussed in Section VII.C.7 and VII.C.8 above, this project does not constitute a SB 288 Major Modification or a Federal Major Modification; therefore BACT is not triggered.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

<table>
<thead>
<tr>
<th>Offset Determination (lb/year)</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Project SSPE (SSPE2)</td>
<td>7,183</td>
<td>493</td>
<td>3,277</td>
<td>67,661</td>
<td>17,642</td>
</tr>
<tr>
<td>Offset Threshold</td>
<td>20,000</td>
<td>54,750</td>
<td>29,200</td>
<td>200,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Offsets triggered?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

2. Quantity of Offsets Required

As seen above, the SSPE is not greater than the offset thresholds for all the pollutants; therefore offset calculations are not necessary and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

a. Any new Major Source, which is a new facility that is also a Major Source,
b. SB 288 Major Modifications and Federal Major Modifications,
c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
d. Any project which results in the offset thresholds being surpassed, and/or
e. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.
a. New Major Source

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. SB 288 Major Modifications and Federal Major Modifications

As demonstrated in VII.C.7 and VII.C.8, this project does not constitute a SB 288 Major Modifications and/or a Federal Major Modifications; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

d. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>Offset Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>16,149</td>
<td>7,183</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SOx</td>
<td>943</td>
<td>493</td>
<td>54,750 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM10</td>
<td>5,758</td>
<td>3,277</td>
<td>29,200 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>33,505</td>
<td>67,661</td>
<td>200,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>20,203</td>
<td>17,642</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:
Exaro Energy LLC  
C-7671, #1102812

As demonstrated above, the SSIPE for CO is greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 20,000 lb/yr. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit’s maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

C-7671-1

There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201] N

Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Y

VOC fugitive emissions from gas plant shall not exceed 1.5 lb/day. [District Rule 2201] N

C-7671-2

There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201] N

Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Y

VOC fugitive emissions from glycol dehydration unit shall not exceed 1.1 lb/day. [District Rule 2201] N

---

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>SSPIE (lb/year)</th>
<th>SSIPE Public Notice Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>16,149</td>
<td>7,183</td>
<td>-8,966</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>943</td>
<td>493</td>
<td>-450</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>5,758</td>
<td>3,277</td>
<td>-2,481</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>33,505</td>
<td>67,661</td>
<td>34,156</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
<tr>
<td>VOC</td>
<td>20,203</td>
<td>17,642</td>
<td>-2,561</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>
Exaro Energy LLC
C-7671, #1102812

Glycol Reboiler
{3200} Emissions from the natural gas-fired unit shall not exceed any of the following limits: 0.036 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.011 lb-PM10/MMBtu, 0.121 lb-CO/MMBtu, and 0.008 lb-VOC/MMBtu. [District Rules 2201 and 4307]

C-7671-3

VOC fugitive emissions from methanol storage tank and methane injection shall not exceed 1.0 lb/day. [District Rule 2201] N

C-7671-16-O

Maximum amount of gas combusted shall not exceed 3672 MMBtu/day. [District Rule 2201] N

Maximum amount of gas combusted shall not exceed 107,640 MMBtu/yr. [District Rule 2201] N

Sulfur compound concentration of gas combusted shall not exceed 1.0 gr S/100 scf (16.9 ppmv H2S). [District Rule 2201] N

Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.036 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.370 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] N

There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with IC engine. [District Rule 2201] N

Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Y

VOC fugitive emissions from flare shall not exceed 0.4 lb/day. [District Rule 2201] N

C-7671-17

For the IC engines, the DELs are stated in the form of emission factors (g/hp-hr or lb/MMBtu), the maximum engine horsepower rating, and the maximum operational time of 24 hours per day.

The engine shall be fired solely on natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201 and 4801] N

Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NOx @ 15% O2, 0.052 g-PM10/hp-hr, 600 ppmvd CO @ 15% O2, or 25 ppmvd VOC @ 15% O2. [District Rules 2201 and District Rule 4702] N

There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201] N

Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Y

VOC fugitive emissions from IC engine shall not exceed 0.3 lb/day. [District Rule 2201] N
E. Compliance Assurance

1. Source Testing

C-7671-1-1 - 3-1,
By District policy source testing will not be required for vessels, tanks, the loading rack, and vapor control system transfer operation.

C-7671-2-0 - Glycol Reboiler
Source testing for NOx and CO will be required at startup.

C-7671-16-0 - Flare
Source testing for NOx, CO, and VOC will be required at startup.

C-7671-17-0 - IC Engine

Pursuant to Rule 4702, the following will be included in the ATC:

NOx, CO, and VOC emissions rates shall be measured (source tested) at startup and not less than not less than once every 24 months thereafter. [District Rules 1081 and 4702]

2. Monitoring

Sulfur Content of Gas
Sulfur content and high heating value (of gas burned in flare) will be required of the gas burned in glycol reboiler and IC engine and flare. The following conditions will be included on ATC C-7671-16-0:

Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. [District Rules 1081, 7.2 and 2201]

The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201]

Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201]

The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201]

Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201]

The monitoring requirements associated with District Rules 4409 and 4702 and NSPS Subpart KKK is addressed in the Rules 4309 and 4702 compliance section of this evaluation, below.
3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following conditions will appear on the permit to operate:

The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rules 1070 and 2201]

Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201]

All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

4. Reporting

Reporting requirements required by Rule 4702. No reporting is required to demonstrate compliance with Rule 2201. SUBPART KKK

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis.

As shown by the AAQA summary sheet (Attachment VI) the proposed equipment will not cause a violation of an air quality standard for NOx, CO, SOx, or PM10

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

<table>
<thead>
<tr>
<th>Diesel ICE</th>
<th>1 Hour</th>
<th>3 Hours</th>
<th>8 Hours</th>
<th>24 Hours</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NOx</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
</tr>
<tr>
<td>SOx</td>
<td>Pass</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>PM10</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
</tr>
</tbody>
</table>

*The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart KKK (40 CFR 60.630 to 60.636) applies to onshore natural gas processing plants. These general requirements and those of 40 CFR Subpart VV, establish leak standards for each category of component (valves, flanges, pressure relief valves etc.) and specify procedures and timelines for repairing leaks. The following condition is included on the ATCs:
• Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409] N

Compliance is expected.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the IC engine is fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following conditions are included ATCs:

Engine C-7671-17-0

• {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

Visible emissions requirements are more stringent for the glycol reboiler and flare as stated in the following conditions:

Glycol Reboiler C-7671-2-1

• Glycol reboiler shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201] N

Flare C-7671-16-0

• Flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201] N

Compliance is expected.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.
An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (Attachment VI), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District’s Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

C-7671-2: Glycol Reboiler

$0.011 \text{ lb PM10/MMBtu} \times \frac{MMBtu}{8578 \text{ dscf}} \times 7000 \text{ gr/lb} = 0.009 \text{ grain/dscf}$

Since 0.009 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

C-7671-16: Flare

$0.008 \text{ lb PM10/MMBtu} \times \frac{MMBtu}{8578 \text{ dscf}} \times 7000 \text{ gr/lb} = 0.007 \text{ grain/dscf}$

Since 0.007 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

C-7671-17: IC Engine

$0.052 \times \frac{g}{hp \cdot hr} \times \frac{1 \text{ hp} \cdot hr}{2542.5 \text{ Btu}} \times \frac{10^6 \text{ Btu}}{8578 \text{ dscf}} \times \frac{0.30 \text{ Btu_m}}{1 \text{ Btu_m}} \times \frac{15.43 \text{ grain}}{g} = 0.011 \frac{\text{ grain}}{\text{ dscf}}$

Since 0.011 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO$_2$, NO$_2$, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to $\leq 0.1$ gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 $\mu$m in diameter. The values in the following table are calculated using the hourly heat input of the glycol reboiler and multiplying by the emission factor for the respective pollutant.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>District Rule 4301 Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO$_2$</td>
</tr>
<tr>
<td>ATC C-7671-2-0 (lb/hr)</td>
<td>0.1/24 = 0.004</td>
</tr>
<tr>
<td>Rule Limit (lb/hr)</td>
<td>140</td>
</tr>
</tbody>
</table>

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, compliance is expected.
Rule 4311 Flares

This rule limits VOC and NOx emissions from flares. The stationary source in the project has a potential to emit less than 10 tons/yr NOx and 10 tons/yr VOCs. Therefore the facility is exempt from all requirements of the rule except the record-keeping requirements of Section 6.2.4. Section 6.2.4 states that "beginning January 1, 2007 facilities claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section." The ATC includes record-keeping requirements that satisfy this requirement. Therefore compliance is expected.

Rule 4408 Glycol Dehydration Systems

Section 5.1.1 of the rule requires that VOC emissions from the glycol dehydration system vent be controlled by a system that directs the vapors to a vapor recovery system, fuel gas system, or a sales gas system. The facility is proposing to route the glycol dehydration vent gas to the process system and/or reboiler burner which therefore, will meet the Section 5.1.2 requirement. Section 5.2 requires that any liquid stream from the glycol dehydration vent be stored and handled in a manner that will not cause evaporation of VOCs. Section 5.3 requires that all control systems be maintained in a leak-free condition. The ATC will include a condition stating that leaks exceeding a reading of 10,000 ppmv are a violation of the permit. Because the emissions control technique consists of routing the glycol dehydration vent to the reboiler burner, the facility is required to ensure that the vent piping is gas-tight by measuring leaks in accordance with EPA Method 21. Additionally, facility is required to implement an I&M program consistent with the requirements of Rule 4409. Therefore the facility also meets the requirements of Sections 5.2 and 5.3. The facility will also be required to comply with the record-keeping requirements of Section 6.1, including monthly records of amount of gas dehydrated, and the emissions control testing requirement of Section 6.3.

The following conditions are included on the ATC:

Glycol reboiler shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201] N

Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Y

VOC fugitive emissions from glycol dehydration unit shall not exceed 1.1 lb/day. [District Rule 2201]

Glycol reboiler shall be fired on reboiler vent gas and/or fuel gas containing no more than 1.0 gr S/100scf. [District Rule 2201] N

Glycol reboiler vent emissions shall be ducted to air cooler followed by BTEX Eliminator gas liquid separator. [District Rule 2201] N

Glycol reboiler shall be fired on a combination of natural gas and glycol reboiler still off-gas. [District NSR Rule] N
Glycol flash tank off gas and reboiler still off-gas shall not be vented to atmosphere, except during an emergency or breakdown. [District Rule NSR Rule] N

Reboiler burner shall operate continually in a smokeless mode. [District Rule 4408, 5.1.2.1] N

Reboiler burner shall include an electronically controlled ignition system with a malfunction alarm system if the pilot flame fails. [District Rule 4408, 5.1.2.2] N

Reboiler shall be equipped with a liquid knockout system to condense any condensable vapors and sight glass ports if the flame is not visible. [District Rule 4408, 5.1.2.3, 5.1.2.4] N

Only glycol shall be used as the dehydration medium. [District Rule 2201] N

Condensate handling shall be conducted in closed systems resulting in fugitive component emissions only and no evaporation of VOCs. [District Rule 2201 and 4408] N

All piping, valves and other fittings shall be constructed and maintained in a gas-tight condition. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4408] N

Records of the amount of gas (in SCF) dehydrated each day and each month shall be maintained, retained on the premises for a period of not less than five years and made available to any District representative upon request. [District Rules 1070, 2201, and 4408] N

Compliance with the rule is expected.

**Rule 4409  Component at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities**

New fugitive emissions components installed with the glycol dehydration unit will be subject to the rule except for 1) those components containing or contacting liquids having a VOC content no greater than 10% w/w evaporation at 150°C as determined by the test method specified in Section 6.3.3; 2) components exclusively handling gas/vapor with a VOC content less than 1% by weight as determined by the test method specified in Section 6.3.2; 3) component exclusively in vacuum service; 4) Components handling commercial quality natural gas exclusively; 5) Pressure relief devices, pumps, and compressors equipped with a closed vent systems defined in Section 3.0; 6) components buried below ground; 6) 1/2 inch nominal or less stainless steel tube fittings which have been demonstrated to the APCO to be leak-free based on initial inspection using the test method specified in Section 6.3.1 where record-keeping requirements only will apply. Such components will be identified in the Rule 4409 Operator Management Plan submitted as well as those components subject to the Rule. Compliance is expected. The following conditions are included on the ATC:

- (3468) The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409] N

- (3469) By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409] N
Exaro Energy LLC
C-7671, #1102812

- (3470) In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409] N

- (3472) The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector’s name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1] N

- (3473) Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2] N

- (3474) Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3] N

- (3471) All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4] N

Rule 4623 Storage of Organic Liquids

Section 5.1 requires that an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system. The three 18,000 gallons NGL tanks will be connected to vapor control system listed on C-1658-3 and vented to flare C-7671-16, respectively. The expected control efficiency is 99%.

The following conditions will be included on the ATCs:

Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] N
Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623] N

The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623] N

All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] N

A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] N

Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] N

Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623] N

Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623] N

Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623] N

Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623] N

Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623] N

If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623] N
Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] N

Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] N

The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule] N

Applicant has elected to participate in the voluntary tank preventive inspection, maintenance, and tank cleaning program. Tank cleaning will be conducted according to the requirements of Table 3. The following conditions are included on the ATC:

This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] N

Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080] N

Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080] N

Compliance with the requirements of this rule is expected.

Rule 4624 --Organic Liquid Loading

This rule applies to organic liquid loading facilities, which load 4,000 gallons or more in any one day. This facility is considered a Class 1 Organic Loading Facility as defined in this rule (>20,000 gallons per day throughput). Vapors generated during loading will be recovered and routed to the process system, flare or to the vapor control system. The operation incorporates a vapor collection and control system consistent with the requirements of this rule. Therefore, compliance this rule is expected.

Rule 4701 – Internal Combustion Engines – Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NOₓ), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 50 bhp, that requires a Permit to Operate (PTO).

Pursuant to Section 2.0 of District Rule 4701, the proposed engine is subject to District Rule 4701 - Internal Combustion Engines – Phase 1. In addition, the engine is subject to District Rule 4702 - Internal Combustion Engines – Phase 2.

As discussed in the following section, at initial start-up, with the IC engine in operational conditions, the IC engine will be in compliance with the emissions limits listed in Table 1, Section 5.1 of District Rule 4702 and with all other requirements from District Rule 4702.
Since the emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than District Rule 4701 requirements, compliance with 4702 rule requirements will satisfy requirements of District Rule 4701.

Therefore, the modified IC engine complies with District Rule 4701 requirements and no further discussion is required.

**Rule 4702 – Internal Combustion Engines – Phase 2**

The purpose of this rule is to limit the emissions of nitrogen oxides (NO\textsubscript{x}), carbon monoxide (CO), and volatile organic compounds (VOC) from spark-ignited internal combustion engines.

This rule applies to any spark-ignited internal combustion engine with a rated brake horsepower greater than 50 horsepower and that requires a Permit-to-Operate (PTO).

Section 5.1 requires that the owner of an internal combustion engine shall not operate it in such a manner that results in emissions exceeding the limits in the Engine Emission Limits table below for the appropriate engine type, according to the compliance schedule listed in Section 7.0. An engine shall be restricted by permit condition to emissions limits, in ppmv (corrected to 15% oxygen on a dry basis), that meet or exceed the following applicable emission limits pursuant to Section 5.1 or Section 8.2.

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>NO\textsubscript{x} Emission Limit (ppmv @ 15% O\textsubscript{2}, dry)</th>
<th>CO Emission Limit (ppmv @ 15% O\textsubscript{2}, dry)</th>
<th>VOC Emission Limit (ppmv @ 15% O\textsubscript{2}, dry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. c. Rich Burn, All Other Engine</td>
<td>25 or 96% reduction</td>
<td>2,000</td>
<td>250</td>
</tr>
</tbody>
</table>

The proposed IC engine is a rich burn engine required to meet the 25 ppmv @ 15% O\textsubscript{2} NO\textsubscript{x} emissions limit for all other engines. The following ATC conditions will be place on the engine ATC to ensure compliance with this requirement:

**S-7671-17-0:**

The engine shall be fired solely on natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201 and 4801] N

Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NO\textsubscript{x} @ 15% O\textsubscript{2}, 0.052 g-PM\textsubscript{10}/hp-hr, 6000 ppmvd CO @ 15% O\textsubscript{2}, or 25 ppmvd VOC @ 15% O\textsubscript{2}. [District Rules 2201 and District Rule 4702] N

Section 5.6 requires that the owner of an engine (excluding those engines subject to Section 4.2 or Section 4.3 unless otherwise specified) subject to the requirements of this rule meet the following requirements:
For each engine with a rated brake horsepower of 1,000 hp or greater and which is permitted to operate more than 2,000 hours per calendar year, or with an external emission control device, shall either install, operate, and maintain continuous monitoring equipment for NO\textsubscript{x}, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install, operate, and maintain APCO-approved alternate monitoring. The monitoring system may be a continuous emissions monitoring system (CEMS), a parametric emissions monitoring system (PEMS), or an alternative monitoring system approved by the APCO. APCO-approved alternate monitoring shall consist of one or more of the following:

- Periodic NO\textsubscript{x} and CO emission concentrations,
- Engine exhaust oxygen concentration,
- Air-to-fuel ratio,
- Flow rate of reducing agents added to engine exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Other operational characteristics.

The applicant has chosen to meet this section of the Rule by proposing a pre-approved alternate emissions monitoring plan A for engines with and without external controls. Plan A for engines with external controls specifies that the permittee perform periodic NO\textsubscript{x}, CO, and O\textsubscript{2} emissions concentrations as specified in District Policy SSP-1810, dated 4/29/04. Therefore, the following condition will be listed on the proposed IC engine ATCs to ensure compliance:

- The permittee shall monitor and record the stack concentration for NO\textsubscript{x} (as NO\textsubscript{2}), CO, and O\textsubscript{2} at least once every calendar quarter using a portable emission monitor that meets District specifications. [In-stack O\textsubscript{2} monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within five days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4701, 5.4 and District Rule 4702, 5.6]

Section 5.6.6 requires that for each engine, including an engine subject to Section 4.2, install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use an alternative device, method, or technique in determining monthly fuel consumption provided that the alternative is approved by the APCO. Therefore, the following condition will be listed on the proposed engine ATC to ensure compliance:

- This engine shall be equipped with a nonresettable fuel meter. The fuel meter shall be calibrated periodically per the recommendations of the manufacturer. [District Rule 4702, 5.6.6]

Section 5.6.7 requires that for each engine, the permittee shall implement the Inspection and Monitoring (I&M) plan submitted to and approved by the APCO pursuant to Section 6.5. The applicant has submitted an I&M program and the implementation of this plan will be explained in detail in the section that covers Section 6.5 of this Rule.
Section 5.6.8 requires that for each engine, collect data through the I&M plan in a form approved by the APCO. The applicant has submitted an I&M program and the implementation of this plan will be explained in detail in the section that covers Section 6.5 of this Rule.

Section 5.6.9 requires that each engine, use a portable NO\textsubscript{x} analyzer to take NO\textsubscript{x} emission readings to verify compliance with the emission requirements of Section 5.1 or Section 8.2 during each calendar quarter in which a source test is not performed. All emission readings shall be taken with the engine operating either at conditions representative of normal operations or conditions specified in the Permit-to-Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. All NO\textsubscript{x} emissions readings shall be reported to the APCO in a manner approved by the APCO. NO\textsubscript{x} emission readings taken pursuant to this section shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive minute sample reading or by taking at least five (5) readings evenly spaced out over the 15 consecutive-minute period. Therefore, the following condition will be listed on the proposed engine ATC to ensure compliance:

- {2994} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702]

Section 6.1 requires that the owner of an engine subject to the requirements of this rule shall submit to the APCO an emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.1 and the compliance schedules of Section 7.0. Such emission control plan shall contain a list with the following for each permitted engine:

- Permit-to-Operate number
- Engine manufacturer
- Model designation
- Rated brake horsepower
- Type of fuel and type of ignition
- Combustion type: rich-burn or lean-burn
- Total hours of operation in the previous one-year period, including typical daily operating schedule
- Fuel consumption (cubic feet for gas or gallons for liquid) for the previous one-year period
- Stack modifications to facilitate continuous in-stack monitoring and to facilitate source testing
- Type of control to be applied, including in-stack monitoring specifications
- Applicable emission limits
- Documentation showing existing emissions of NO\textsubscript{x}, VOC, and CO, and
- Date that the engine will be in full compliance with Rule 4702.
Section 6.1.2 requires that the emission control plan shall identify the type of emission control device or technique to be applied to each engine and a construction/removal schedule, or shall provide support documentation sufficient to demonstrate that the engine is in compliance with the emission requirements of this rule.

The applicant has submitted all the required information for Section 6.1 in the application for the IC engine involved with this project.

Section 6.2 requires that except for engines subject to Section 4.0, the owner of an engine subject to the requirements of this rule shall maintain an engine operating log to demonstrate compliance with this rule. This information shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The engine operating log shall include, on a monthly basis, the following information:

- Total hours of operation,
- Type and quantity (cubic feet of gas or gallons of liquid) of fuel used,
- Maintenance or modifications performed,
- Monitoring data,
- Compliance source test results, and
- Any other information necessary to demonstrate compliance with this rule.

Therefore, the following condition will be listed on the proposed engine ATC to ensure compliance:

- The permittee shall maintain an engine operating log to demonstrate compliance for this engine. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data (quarterly monitoring data unless conducting monthly monitoring), compliance source test results (conducted every 24 months), and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet. [District Rule 4702] N

Section 6.2.2 requires that the data collected pursuant to the requirements of Section 5.6 shall be maintained for at least five years, shall be readily available, and made available to the APCO upon request. Therefore, the following previously proposed condition will be listed on proposed ATC S-1188-16-0 to ensure compliance:

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2.1]

Section 6.3 requires that the owner of an engine subject to the emission limits in Section 5.1 or the requirements of Section 8.2, shall:

Demonstrate compliance with applicable limits by the applicable date specified in Section 7.6 and at least once every 24 months thereafter, in accordance with the test methods in Section 6.4.

Conduct emissions source testing with the engine operating either at conditions representative of normal operations or conditions specified in the Permit-to-Operate. For emissions source
testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15 percent oxygen. For engines that comply with a percent reduction limit in Table 1, the percent reduction of NOx emissions shall also be reported.

In addition to other information, the source test protocol shall describe which critical parameters will be measured and how the appropriate range for these parameters shall be established. The range for these parameters shall be incorporated into the I&M plan.

Therefore, the following previously proposed conditions will be listed on the proposed engine ATC to ensure compliance:

- (2900) NOx, CO, and VOC emissions shall be measured (source tested) at startup and annually thereafter. [District Rule 4701] N
- (109) Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] N
- (110) The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] N
- Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702]

In addition, the following condition will be listed on the proposed engine ATC to ensure compliance:

- For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District 4702, 6.3.2]

Section 6.4 requires that the compliance with the requirements of Section 5.0 shall be determined in accordance with the following test procedures or any other method approved by EPA and the APCO:

- Oxides of nitrogen - EPA Method 7E, or ARB Method 100.
- Carbon monoxide - EPA Method 10, or ARB Method 100.
- Stack gas oxygen - EPA Method 3 or 3A, or ARB Method 100.
- Volatile organic compounds - EPA Method 25A or 25B, or ARB Method 100.
- Operating horsepower determination - any method approved by EPA and the APCO.
Therefore, the following condition will be listed on the proposed engine ATC to ensure compliance:

- The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 4701 and 4702]

Section 6.5 requires that the owner of an engine subject to the emission limits in Section 5.1 or the requirements of Section 8.2, shall submit to the APCO for approval, an I&M plan that specifies all actions to be taken to satisfy the following requirements and the requirements of Section 5.6. Applicant has submitted an I&M plan that fulfills the requirements of this rule.

Section 6.5.6 specifies procedures for preventive and corrective maintenance performed for the purpose of maintaining an engine in proper operating condition. The applicant has proposed that the engines will be operated and maintained per the manufacturer’s specifications. Therefore, the following condition will be listed on the proposed engine ATC to ensure compliance:

- This engine shall be operated and maintained in proper operating condition per the manufacturer’s requirements as specified on the Inspection and Maintenance (I&M) plan submitted to the District. [District Rule 4702, 6.5.5]

Compliance is expected.

**Rule 4801 Sulfur Compounds**

The gas combusted in the IC engine, glycol reboiler, and flare will contain no more than 1.0 gr S/100 scf and therefore is expected to have exhaust sulfur compound emissions much less than 2000 ppmv. Therefore compliance with this rule is expected.

**California Environmental Quality Act (CEQA)**

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.
The District performed an Engineering Evaluation (this document) for the proposed project and determined that the potential to emit of this unit is less than two pounds in any one day for each criteria pollutant except CO. Thus, Best Available Control Technology (BACT) requirements do not apply. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

The issuance of permits for projects not subject to BACT requirements and with a health impact that is less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Additionally, the gas processed in the gas plant (potentially combusted in the flare) is currently being released to atmosphere at the associated oil production facility (C-1658). As such, the potential flaring of the gas will not result in an increase in overall Green House Gas Emissions. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct C-7671-1-1, '-2-1, '-3-1, '-16-0 and '-17-0 subject to the permit conditions on the attached draft Authorities to Construct in Attachment VII.

X. Billing Information

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Attachments

- Existing ATCs
- Location
- Process Flow Diagrams
- Fugitive Emissions Calculations
- Emissions Profiles
- HRA and AAQA
- Draft ATCs
ATTACHMENT I
Existing ATCs
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-1-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                 HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
           KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
GAS PLANT INCLUDING GAS INTAKE SYSTEM, LOW TEMPERATURE SEPARATION UNIT, JT UNIT, AND STABILIZER UNIT (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three
minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

9. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

10. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using
California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum
Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

11. Gas intake system shall include vessels V-100, V-101, and V-109, heat exchangers E-100, E-XXX, and E-110, pump
P-100, and compressor K-101. [District Rule 2201]

12. Low temperature separation unit shall consist of vessels V-101, V-104, and V-105, heat exchangers E-101 A and
101B, E-102, E-103, and E-106, and compressor C-101. [District Rule 2201]

13. Joule-Thompson unit shall included vessel V-100, heat exchanger E-100, and heater H-100. [District Rule 2201]

14. Stabilizer unit shall consist of vessels V-103 and V-200, heat exchangers E-104 and E-105 and AC-200, and
compressor C-200. [District Rule 2201]

15. VOC fugitive emissions from gas plant shall not exceed 5.5 lb/day. [District Rule 2201]

16. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting
requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

17. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and
make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

18. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating
any changes to the existing, approved OMP. [District Rule 4409]

19. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection,
maintenance, process pressure relief device (PRD), component identification, record keeping, and notification
requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those
components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

20. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the
inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a
minimum, all of the following information: 1) The total number of components inspected, and the total number and
percentage of leaking components found by component types; 2) The location, type, name or description of each
leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection
and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks
record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal
from operation of the leaking component(s); 6) The identification and location of essential components and critical
components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after
leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and
critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one
year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv
after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business
telephone number. [District Rule 4409, 6.2.1]

21. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-
inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

22. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for
inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of
the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of
calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas
expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]
23. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO:  C-7671-2-0

LEGAL OWNER OR OPERATOR:  EXARO ENERGY LLC
MAILING ADDRESS:  800 GESSNER, SUITE 900
                    HOUSTON, TX 77024

LOCATION:  GAS PROCESSING PLANT
           KETTLEMAN, CA

SECTION:  NE30  TOWNSHIP:  23S  RANGE:  19E

EQUIPMENT DESCRIPTION:  ETHYLENE GLYCOL DEHYDRATION UNIT WITH 1 MMBTU/HR MAXON CORPORATION MODEL KDZERLE015NFB LOW NOX BURNER AND JATCO INC BTEX ELIMINATOR WITH FLASH VESSEL AND GLYCOL REBOILER STILL VAPORS VENTED TO PROCESS SYSTEM OR REBOILER FUEL LINE (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 20]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
7. Glycol reboiler shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201]

8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

9. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

10. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

11. VOC fugitive emissions from glycol dehydration unit shall not exceed 1.1 lb/day. [District Rule 2201]

12. Glycol reboiler shall be fired on reboiler vent gas and/or fuel gas containing no more than 1.0 gr/S/100scf. [District Rule 2020]

13. Glycol reboiler vent emissions shall be ducted to air cooler followed by BTEX Eliminator gas liquid separator. [District Rule 2201]

14. Glycol reboiler shall be fired on a combination of natural gas and glycol reboiler still off-gas. [District NSR Rule]

15. Glycol flash tank off gas and reboiler still off-gas shall not be vented to atmosphere, except during an emergency or breakdown. [District Rule NSR Rule]

16. Reboiler burner shall operate continually in a smokeless mode. [District Rule 4408, 5.1.2.1]

17. Reboiler burner shall include an electronically controlled ignition system with a malfunction alarm system if the pilot flame fails. [District Rule 4408, 5.1.2.2]

18. Reboiler shall be equipped with a liquid knockout system to condense any condensable vapors and sight glass ports if the flame is not visible. [District Rule 4408, 5.1.2.3, 5.1.2.4]

19. Only glycol shall be used as the dehydration medium. [District Rule 2201]

20. Condensate handling shall be conducted in closed systems resulting in fugitive component emissions only and no evaporation of VOCs. [District Rule 2201 and 4408]

21. All piping, valves and other fittings shall be constructed and maintained in a gas-tight condition. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4408]

22. Combustion emissions from glycol reboiler unit shall not exceed any of the following limits: 0.036 lb-NOx/MBtu, 0.011 lb-PM10/MBtu, 0.121 lb-CO/MBtu, and 0.008 lb-VOC/MBtu. [District Rules 2201 and 4307]

23. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081, 7.2 and 2201]

24. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

27. This unit shall be tested for compliance with the NOx and CO emissions limits at startup. [District Rule 2201]

28. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. NOx emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. CO emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]

30. Stack gas oxygen shall be determined using EPA Method 3 or ARB Method 100. [District Rule 4305]

31. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

32. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

33. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

34. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

35. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

36. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

37. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

38. Records of the amount of gas (in SCF) dehydrated each day and each month shall be maintained, retained on the premises for a period of not less than five years and made available to any District representative upon request. [District Rules 1070, 2201, and 4408]

39. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-3-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                 HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
          KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
METHANOL INJECTION SYSTEM CONSISTING OF 50 BBL METHANOL STORAGE TANK VENTED TO SHARED
VAPOR CONTROL SYSTEM LISTED ON C-1658-3-1 AND TWO ELECTRIC PUMPS

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
   by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's
determination that the submitted design and performance of the proposed alternate equipment is equivalent to the
specifically authorized equipment. [District Rule 220]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum
   rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters.
   [District Rule 20]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to
   Construct. [District Rule 220]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No
   changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate
   equipment. [District Rule 220]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6081
2. Components found to be leaking either liquids or gases shall be immediately repaired. [District Rules 2201 and 4623]

3. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2201 and 4623]

4. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

7. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201 and 4623]

9. VOC fugitive emissions shall not exceed 1.0 lb/day. [District Rule 2201]

10. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

11. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

12. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

13. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

14. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

15. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

16. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

17. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

18. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
22. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

23. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

24. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

26. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

27. Permitee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

28. Permitee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

29. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

30. Permitee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

31. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

32. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

33. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

34. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
35. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

36. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

37. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-10-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                  HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
          KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
153 MMBTU/HR CEB MODEL 4500 ENCLOSED PROCESS FLARE (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
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8. A flame shall be present at all times when combustible gases are vented through this flare. [District Rule 2201]

9. Sulfur compound concentration of gas combusted shall not exceed 1.0 gr/S100 scf (16.9 ppmv H2S). [District Rule 2201]

10. Flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201]

11. Flare shall be equipped with total gas volume flow meter. [District Rule 2201]

12. Maximum amount of gas combusted shall not exceed 3672 MMBtu/day. [District Rule 2201]

13. Maximum amount of gas combusted shall not exceed 425,000 MMBtu/yr. [District Rule 2201]

14. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as N02): 0.03 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.015 lb/MMBtu; or VOC: 0.019 lb/MMBtu. [District Rule 2201]

15. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

16. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities <10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

17. VOC fugitive emissions from flare shall not exceed 0.4 lb/day. [District Rule 2201]

18. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081, 7.2 and 2201]

19. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

20. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201]

21. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201]

22. Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201]

23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. NOx emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]

26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. CO emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]

27. Stack gas oxygen shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4305]

28. VOC content shall be determined using methods ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]

29. This unit shall be tested for compliance with the NOx, CO, and VOC emissions limits at startup. [District Rule 2201]

30. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

CONDITIONS CONTINUE ON NEXT PAGE
31. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

32. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

33. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

34. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

35. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

36. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

37. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-11-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC

MAILING ADDRESS: 800 GESSNER, SUITE 900
HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

SECTION: NE30 TOWNSHIP: 23S RANGE: 19E

EQUIPMENT DESCRIPTION:
18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with NGL tank. [District Rule 2201]

9. Permittee shall maintain with the permit accurate fugitive emission component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201and 4623]

13. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

22. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
34. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-12-0  
ISSUANCE DATE: 02/03/2009

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                    HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
           KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmamn 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with NGL tank. [District Rule 2201]

9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

13. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

22. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOCs at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
34. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-13-0
LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                      HOUSTON, TX 77024
LOCATION: GAS PROCESSING PLANT
           KETTLEMAN, CA
SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E
EQUIPMENT DESCRIPTION:
18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
   by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's
determination that the submitted design and performance of the proposed alternate equipment is equivalent to the
specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum
   rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters.
   [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to
   Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No
   changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate
   equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. THIS IS NOT A PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

[Signature]

DAVID WARNER, Director of Permit Services
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6081
7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with NGL tank. [District Rule 2201]

9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

13. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

22. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
34. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
AUTHORITY TO CONSTRUCT

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
ORGANIC LIQUID LOADING FACILITY WITH CLASS I ORGANIC LIQUID LOADING RACK WITH TWO LOADING BAYS,
TWO 150 HP ELECTRIC COMPRESSORS, AND VAPOR CONTROL SYSTEM VENTING TO PROCESS SYSTEM,
FLARE C-7671-10, OR VAPOR CONTROL SYSTEM TRANSFER UNIT (OR EQUIVALENT)

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
   by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's
determination that the submitted design and performance of the proposed alternate equipment is equivalent to the
specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum
   rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters.
   [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to
   Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No
   changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate
   equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

9. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with NGL loading rack and loading bays. [District Rule 2201]

10. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

11. VOC fugitive emissions shall not exceed 3.0 lb/day. [District Rule 2201]

12. The loading racks shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 95%. [District Rule 4624]

13. The loading and vapor collection equipment shall be operated and maintained such that there are no leaks or no excess organic liquid drainage at disconnections, in accord with Rule 4624 Transfer of Organic Liquid [Rule 4624]

14. The vapor collection and control system shall operate such that the pressure in the delivery tank being loaded does not exceed 18 inches water column pressure and (6) inches water column vacuum [District Rule 4624]

15. VOC emissions shall not exceed 0.08 pounds per 1,000 gallons of organic liquid loaded. [Rule 4624]

16. The vapor recovery system shall be connected and operating any time loading is proceeding. [Rule 4624]

17. Valves, flanges, connectors, and pump and compressor seals shall be maintained leak-free as defined in Rule 4624.

18. By July 20, 2009 initial source testing of the VOC emissions control system shall be performed with the method prescribed in Section 6.3.2 of Rule 4634. Source testing shall be done once every 60 months after initial source testing but no more than 30 days before or after initial source test anniversary date. [District Rule 4624]

19. Records of daily throughput, for each product loaded, and results of any required leak inspections shall be kept on site for a minimum of five years and made available to District inspectors upon request. [Rule 4624]

20. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

21. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

22. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

23. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOCs at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]
24. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

25. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

26. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

27. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]
ATTACHMENT II
Location Map
Figure 1-1
Map Showing the General Location of the Project

Approximate location of the Exaro Natural Gas Processing Plant (NE Qtr of Section 30, T29S, R19E). From Kings County Zoning Map No. 301.
ATTACHMENT III
Process Flow Diagrams
Vapors from the following equipment are directed to the VRU:
- Wash Tank (C-1658-3)
- Stock Tanks (C-1658-5, '6, and '7)
- Glycol Dehy Unit (C-7671-2)
- Three 18,000 Gallon NGL Vessels (C-7671-11, '12, and '13)
- Loading Rack (C-7671-14)

If Compressor/gas plant is down, then vapors will go to flare
ATTACHMENT IV
Fugitive Emissions Calculations
Fugitive Emissions Using Screening Emission Factors
California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

Percentage of components with \( \geq 10,000 \text{ ppmv} \) leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 100 %
Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

<table>
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<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
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<th>Screening Value EF - TOC &lt; 10,000 ppmv (lb/day/source)</th>
<th>Screening Value EF - TOC ( \geq 10,000 \text{ ppmv} ) (lb/day/source)</th>
<th>VOC emissions (lb/day)</th>
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* Emission factor not available. All components from equipment type and service will be assessed as \(< 10,000 \text{ ppmv}\)

Total VOC Emissions = 0.1 lb/day
**Fugitive Emissions Using Screening Emission Factors**

California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities

**Table IV-2c. Oil and Gas Production**

Screening Value Ranges Emission Factors

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.2 lb/day
C-7671-1
Condensor

Fugitive Emissions Using Screening Emission Factors
California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

<table>
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<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component</th>
<th>Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC&lt; 10,000 ppmv</th>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
C-7671-1
Heat Exchanger #1

**Fugitive Emissions Using Screening Emission Factors**

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities

*Table IV-2c. Oil and Gas Production*

*Screening Value Ranges Emission Factors*

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<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC &lt; 10,000 ppmv (lb/day/source)</th>
<th>Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)</th>
<th>VOC emissions (lb/day)</th>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
### Fugitive Emissions Using Screening Emission Factors

**California Implementation Guidelines for Estimating Mass Emissions of Fugitive HydrocarbonLeaks at Petroleum Facilities**

**Table IV-2c. Oil and Gas Production**

**Screening Value Ranges Emission Factors**

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<thead>
<tr>
<th>Equipment Type</th>
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<th>Component Count</th>
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<th>Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)</th>
<th>VOC emissions (lb/day)</th>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
**Fugitive Emissions Using Screening Emission Factors**

*California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities*

*Table IV-2c. Oil and Gas Production Screening Value Ranges Emission Factors*

- **Percentage of components with ≥ 10,000 ppmv leaks allowed?** 0%
- **Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)?** 100%
- **Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)?** 100%

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC &lt; 10,000 ppmv (lb/day/source)</th>
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<th>VOC emissions (lb/day)</th>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
### C-7671-1

**V-102**

**Fugitive Emissions Using Screening Emission Factors**

**California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities**

**Table IV-2c. Oil and Gas Production**

**Screening Value Ranges Emission Factors**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC &lt; 10,000 ppmv (lb/day/source)</th>
<th>Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)</th>
<th>VOC emissions (lb/day)</th>
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<tr>
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<td>3.762E+00</td>
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</table>

* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
### Table IV-2c. Oil and Gas Production Screening Value Ranges Emission Factors

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC &lt; 10,000 ppmv</th>
<th>≥ 10,000 ppmv</th>
<th>VOC emissions (lb/day)</th>
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<td>0.00</td>
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<tr>
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<td>3.762E+00</td>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.1 lb/day
## Fugitive Emissions Using Screening Emission Factors

**California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities**

### Table IV-2c. Oil and Gas Production

**Screening Value Ranges Emission Factors**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
<th>Total allowable leaking components</th>
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<td>&lt; 10,000 ppmv</td>
<td>≥ 10,000 ppmv</td>
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<td>(lb/day/source)</td>
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**Total VOC Emissions =** 0.1 lb/day
Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities

Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

Percentage of components with ≥ 10,000 ppmv leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 100 %
Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Service</th>
<th>Component Count</th>
<th>Total allowable leaking components</th>
<th>Screening Value EF - TOC (lb/day/source)</th>
<th>VOC emissions (lb/day)</th>
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<td>Valves</td>
<td>Gas/Light Liquid</td>
<td>4</td>
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<td>0</td>
<td>7.937E-04 3.762E+00 0.00</td>
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* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total VOC Emissions = 0.3 lb/day
ATTACHMENT V
Emissions Profiles
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<th>CO</th>
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Quarterly Net Emissions Change (lb/Qtr)

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Check if offsets are triggered but exemption applies

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Offset Ratio

Quarterly Offset Amounts (lb/Qtr)

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Permit #: C-7671-2-1   Last Updated
Facility: EXARO ENERGY 09/06/2010 DAVIDSOS LLC

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**Equipment Pre-Baselined: NO**

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<th>VOC</th>
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<td>Q3: 0.0</td>
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<td>Q4: 0.0</td>
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| Check if offsets are triggered but exemption applies | N | N | N | N | N |

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<td>Q3:</td>
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<td>Q4:</td>
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<tr>
<td>Equipment Pre-Baselined: NO</td>
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<td>-----------------------------</td>
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<td>Potential to Emit (lb/Yr)</td>
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<tr>
<td>Daily Emis. Limit (lb/Day)</td>
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<table>
<thead>
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<tbody>
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<td>Q1:</td>
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<td>Q3:</td>
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<tr>
<td>----------------</td>
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### Application Emissions

**Permit #: C-7671-13-1**  
**Last Updated:** 09/06/2010

**Facility:** EXARO ENERGY  
**DAVIDSOS LLC**

#### Equipment Pre-Baselined: NO

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<th>SOX</th>
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<th>CO</th>
<th>VOC</th>
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<tbody>
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#### Quarterly Net Emissions Change (lb/Quart)

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<tr>
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#### Check if offsets are triggered but exemption applies

|       | N   | N   | N   | N   | N   | N   |

#### Offset Ratio

<p>| |</p>
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#### Quarterly Offset Amounts (lb/Quart)

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<th>Q4:</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
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- NOX:
- SOX:
- PM10:
- CO:
- VOC:
- Daily Emis. Limit (lb/Day):
- Offset Ratio:
- Quarterly Offset Amounts (lb/Quart):
- Check if offsets are triggered but exemption applies:
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<th>VOC</th>
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### Application Emissions

#### Permit #: C-7671-16-0  
**Last Updated**  
**Facility:** EXARO ENERGY  
**09/06/2010 DAVIDSOS LLC**

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<td>9956.0</td>
<td>1732.0</td>
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<tr>
<td>Q3</td>
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<td>215.0</td>
<td>9956.0</td>
<td>1732.0</td>
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<td>39.0</td>
<td>215.0</td>
<td>9956.0</td>
<td>1732.0</td>
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<th>VOC</th>
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<td>105.0</td>
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ATTACHMENT VI
HRA and AAQA
San Joaquin Valley Air Pollution Control District
Risk Management Review

To: Steve Davidson, AQE – Permit Services
From: Jaime Horio, AQS – Technical Services
Date: August 30, 2010
Facility Name: Exaro Energy
Location: S30, T23S, R19E
Application #(s): C-7671-1-1, -2-1, -3-1, -16-0, -17-0
Project #: C-1102812

A. RMR SUMMARY

<table>
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<tr>
<th>Categories</th>
<th>All Units (Unit 1-1, 2-1, 3-1, 16-0, 17-0)</th>
<th>Project Totals</th>
<th>Facility Totals</th>
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<td>Chronic Hazard Index</td>
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<td>NA¹</td>
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<td>Special Permit Conditions?</td>
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</table>

¹ The Prioritization Score for this facility is less than 1.0, therefore no further analysis is required.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 1-1, 2-1, 3-1, 16-0, 17-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on August 19, 2010, to perform a Risk Management Review for a proposed modification to a natural gas processing plant. The modification consisted of a change in fugitive VOCs from units 1-1, 2-1 and 3-1. The glycol dehydration unit associated with unit 2-1 also changed. The project also includes the installation of 49.9 MMBtu/hr process flare and a 145 bhp gas-fired IC engine.
This project is subject to NSR Public notice, so an Ambient Air Quality Analysis was conducted as well.

II. Analysis

Toxic emissions for this proposed unit were calculated using Ventura County's emission factors for internal and external combustion sources, and District emission factors for fugitive VOCs from oilfield equipment. In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

<table>
<thead>
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<th>Analysis Parameters</th>
<th>Unit 1-1</th>
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<tr>
<td>VOCs (lb/yr)</td>
<td>657</td>
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<tr>
<td>Closest Receptor (m)</td>
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</tr>
<tr>
<td>Max Hours per Year</td>
<td>8760</td>
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<table>
<thead>
<tr>
<th>Analysis Parameters</th>
<th>Unit 2-1</th>
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<tbody>
<tr>
<td>VOCs (lb/yr)</td>
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<tr>
<td>Closest Receptor (m)</td>
<td>609</td>
</tr>
<tr>
<td>Max Hours per Year</td>
<td>8760</td>
</tr>
<tr>
<td>Throughput (MMScf/yr)</td>
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<tr>
<td>Methanol Emissions (lb/yr)</td>
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<td>Max Hours per Year</td>
<td>8760</td>
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<tr>
<td>Throughput (MMSCf/yr)</td>
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<td>Max Hours per Year</td>
<td>8760</td>
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Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM$_{10}$, as well as a RMR. The emission rates used for criteria pollutant modeling for each unit are listed below:
The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

<table>
<thead>
<tr>
<th>Diesel ICE</th>
<th>1 Hour</th>
<th>3 Hours</th>
<th>8 Hours</th>
<th>24 Hours</th>
<th>Annual</th>
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<tbody>
<tr>
<td>CO (lb/yr)</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NOx (lb/yr)</td>
<td>Pass†</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>SOx (lb/yr)</td>
<td>Pass</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>PM10 (lb/yr)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass‡</td>
<td>Pass‡</td>
</tr>
</tbody>
</table>

*Results were taken from the attached PSD spreadsheet.
†The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District’s approved procedures.
‡The criteria pollutants are below EPA’s level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The prioritization score is less than 1.0. In accordance with the District’s Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

Attachments:

A. RMR request from the project engineer
B. Toxic emissions summary
C. Prioritization score
D. Facility Summary
E. AAQA Summary
ATTACHMENT VII
Draft ATCs
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-1-1

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

SECTION: NE30 TOWNSHIP: 23S RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF GAS PLANT INCLUDING GAS INTAKE SYSTEM, LOW TEMPERATURE SEPARATION UNIT, JT UNIT, AND STABILIZER UNIT (OR EQUIVALENT): REVISE EQUIPMENT TO THE FOLLOWING -- TWO FIN FAN COOLERS, SCRUBBER (V-101), FILTER SCRUBBER (V-102), COOLER FAN, HP SCRUBBER (V-100), REFRIGERATION UNIT WITH TWO HEAT EXCHANGERS AND A CONDENSER, AND A JT UNIT

CONDITIONS

1. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]
7. VOC fugitive emissions from gas plant shall not exceed 1.5 lb/day. [District Rule 2201]
8. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO
9. (3468) The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

10. (3469) By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

11. (3470) In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

12. (3472) The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

13. (3473) Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

14. (3474) Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

15. (3471) All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

16. This ATC shall be implemented concurrently with ATC S-7671-1-0. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-2-1
LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSERT, SUITE 900
                          HOUSTON, TX 77024
LOCATION: GAS PROCESSING PLANT
                      KETTLEMAN, CA
SECTION: NE30    TOWNSHIP: 23S   RANGE: 19E
EQUIPMENT DESCRIPTION:
MODIFICATION OF ETHYLENE GLYCOL DEHYDRATION UNIT WITH 1 MMBTU/HR MAXON CORPORATION MODEL
KD2ERLE015NB LOW NOX BURNER AND JATCO INC BTEX ELIMINATOR WITH FLASH VESSEL AND GLYCOL
REBOILER STILL VAPORS VENTED TO PROCESS SYSTEM OR REBOILER FUEL LINE (OR EQUIVALENT): REVISE
BURNER RATING TO 0.08 MMBTU/HR

CONDITIONS

1. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Glycol reboiler shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or
   periods aggregating more than three minutes in any one hour. [District Rules 2201]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using
   California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum
   Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]
7. VOC fugitive emissions from glycol dehydration unit shall not exceed 1.1 lb/day. [District Rule 2201]
8. Glycol reboiler shall be fired on reboiler vent gas and/or fuel gas containing no more than 1.0 gr S/100scf. [District
   Rule 2020]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
C-7671-2-1  Sep 27 2013  3:22PM  DAVIDSOS  - Joint Inspection NOT Required
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
9. Glycol reboiler vent emissions shall be ducted to air cooler followed by BTEX Eliminator gas liquid separator. [District Rule 2201]

10. Glycol reboiler shall be fired on a combination of natural gas and glycol reboiler still off-gas. [District NSR Rule]

11. Glycol flash tank off gas and reboiler still off-gas shall not be vented to atmosphere, except during an emergency or breakdown. [District Rule NSR Rule]

12. Reboiler burner shall operate continually in a smokeless mode. [District Rule 4408, 5.1.2.1]

13. Reboiler burner shall include an electronically controlled ignition system with a malfunction alarm system if the pilot flame fails. [District Rule 4408, 5.1.2.2]

14. Reboiler shall be equipped with a liquid knockout system to condense any condensable vapors and sight glass ports if the flame is not visible. [District Rule 4408, 5.1.2.3, 5.1.2.4]

15. Only glycol shall be used as the dehydration medium. [District Rule 2201]

16. Condensate handling shall be conducted in closed systems resulting in fugitive component emissions only and no evaporation of VOCs. [District Rule 2201 and 4408]

17. All piping, valves and other fittings shall be constructed and maintained in a gas-tight condition. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4408]

18. Combustion emissions from glycol reboiler unit shall not exceed any of the following limits: 0.036 lb-NOx/MMBtu, 0.011 lb-PM10/MMBtu, 0.121 lb-CO/MMBtu, and 0.008 lb-VOC/MMBtu. [District Rules 2201 and 4307]

19. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081, 7.2 and 2201]

20. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

21. (109) Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

22. (110) The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

23. This unit shall be tested for compliance with the NOx and CO emissions limits at startup. [District Rule 2201]

24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. NOx emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 1081]

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. CO emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 1081]

26. Stack gas oxygen shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 1081]

27. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

28. (3468) The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

29. (3469) By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]
30. (3470) In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

31. (3472) The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

32. (3473) Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

33. (3474) Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

34. Records of the amount of gas (in SCF) dehydrated each day and each month shall be maintained, retained on the premises for a period of not less than five years and made available to any District representative upon request. [District Rules 1070, 2201, and 4408]

35. (3471) All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

36. This ATC shall be implemented concurrently with ATC S-7671-2-0. [District Rule 2201]
San Joaquin Valley  
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-3-1
LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900  
HOUSTON, TX 77024
LOCATION: GAS PROCESSING PLANT  
KETTLEMAN, CA
SECTION: NE30 TOWNSHIP: 23S RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHANOL INJECTION SYSTEM CONSISTING OF 50 BBL METHANOL STORAGE TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON C-1658-3-1 AND TWO ELECTRIC PUMPS: REPLACE METHANOL STORAGE TANK WITH A 200 GALLON METHANOL STORAGE TANK AND LIST PERMIT UNITS C-7671-11, '-12, '-13, AND '-14 AS CONNECTED TO THE SHARED VAPOR CONTROL SYSTEM

CONDITIONS

1. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]
7. VOC fugitive emissions shall not exceed 1.0 lb/day. [District Rule 2201]
8. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER - Director of Permit Services
C-7671-3-1: Sep 27 2010 2:25PM - DAVIDSB: joint inspection NOT Required
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
9. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

10. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analyte/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

11. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

12. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

13. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

14. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

15. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOCs at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

16. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

17. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

18. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

19. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rules 2201 and 4409, 6.2.4]

20. This ATC shall be implemented concurrently with ATC C-7671-3-0. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-11-1
LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
HOUSTON, TX 77024
LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA
SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT): LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
C-7671-11-1  Sep 27 2010  2:32PM - DAVIDGDS  Join Inspection NOT Required
Central Regional Office  •  1990 E. Gettysburg Ave.  •  Fresno, CA 93726  •  (559) 230-5900  •  Fax (559) 230-6061
7. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

13. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

22. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. (3468) The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. (3469) By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. (3470) In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. (3472) The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409.6.2.1]
34. (3473) Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. (3474) Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. (3471) All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

37. ATC C-7671-11-0 shall be implemented prior to or concurrent with this ATC. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-12-1

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

SECTION: NE30 TOWNSHIP: 23S RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT): LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
C-7671-12-1, Sep 27 2010 2:22PM - DAVOSGOS Joint Inspection NOT Required
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
7. (15) No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

13. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rules 2201 and 4623]

14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

22. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. {3472} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
34. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

37. ATC C-7671-12-0 shall be implemented prior to or concurrent with this ATC. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-13-1

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900

HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

SECTION: NE30 TOWNSHIP: 23S RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 18,000 GALLON NATURAL GAS LIQUIDS STORAGE VESSEL VENTED TO FLARE C-7671-10 (OR EQUIVALENT): LIST AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]

2. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]

3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
C-7671-13-1: Sep 17 2010 2:22PM - DAVID/DSG9
Central Regional Office • 1980 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
7. (15) No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

9. Permitee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities <10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

10. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201]

11. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201]

12. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]

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14. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

15. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

17. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rules 2210 and 4623]

18. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rules 2201 and 4623]

20. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
21. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

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23. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201]

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

25. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

26. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080]

27. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080]

28. The operator shall keep accurate records of types, storage temperature, and Reid vapor pressure of liquids stored. The operator shall maintain monthly records of average daily throughput. Records shall be made available to District personnel upon request. [District NSR Rule]

29. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

30. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

31. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

32. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

33. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]
34. {3473} Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

35. {3474} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

36. {3471} All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

37. ATC C-7671-13-0 shall be implemented prior to or concurrent with this ATC. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-14-1

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                   HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
           KETTLEMAN, CA

SECTION: NE30  TOWNSHIP: 23S  RANGE: 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ORGANIC LIQUID LOADING FACILITY WITH CLASS I ORGANIC LIQUID LOADING RACK WITH
TWO LOADING BAYS, TWO 150 HP ELECTRIC COMPRESSORS, AND VAPOR CONTROL SYSTEM VENTING TO
PROCESS SYSTEM, FLARE C-7671-10, OR VAPOR CONTROL SYSTEM TRANSFER UNIT (OR EQUIVALENT): LIST
AS CONNECTED TO THE VAPOR CONTROL SYSTEM LISTED ON PERMIT C-7671-3

CONDITIONS

1. (271) All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]
2. (98) No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 41021]
3. (15) No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three
   minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 41011]
4. (14) Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 42011]
5. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 22011]
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using
   California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum
   Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 22011]
7. VOC fugitive emissions shall not exceed 3.0 lb/day. [District Rule 2201]
8. The loading racks shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection
   systems capable of reducing VOC emissions by at least 95%. [District Rule 46241]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
9. The loading and vapor collection equipment shall be operated and maintained such that there are no leaks or no excess organic liquid drainage at disconnections, in accord with Rule 4624 Transfer of Organic Liquid [Rule 4624]

10. The vapor collection and control system shall operate such that the pressure in the delivery tank being loaded does not exceed 18 inches water column pressure and (6) inches water column vacuum [District Rule 4624]

11. VOC emissions shall not exceed 0.08 pounds per 1,000 gallons of organic liquid loaded. [Rule 4624]

12. The vapor recovery system shall be connected and operating any time loading is proceeding. [Rule 4624]

13. Valves, flanges, connectors, and pump and compressor seals shall be maintained leak-free as defined in Rule 4624. [District Rules 4624]

14. By July 20, 2009 initial source testing of the VOC emissions control system shall be performed with the method prescribed in Section 6.3.2 of Rule 4634. Source testing shall be done once every 60 months after initial source testing but no more than 30 days before or after initial source test anniversary date. [District Rule 4624]

15. Records of daily throughput, for each product loaded, and results of any required leak inspections shall be kept on site for a minimum of five years and made available to District inspectors upon request. [Rule 4624]

16. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

17. (3468) The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

18. (3469) By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

19. (3470) In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

20. (3472) The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

21. (3473) Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

22. (3474) Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

23. (3471) All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

24. This ATC shall be implemented concurrently with ATC G-7671-14-0. [District Rule 2201]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-16-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GESSNER, SUITE 900
                   HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
           KETTELEMAN, CA

EQUIPMENT DESCRIPTION:
49.9 MMBTU/HR KANE MODEL KHE 7000 COANDA EFFECT FLARE

CONDITIONS

1. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District NSR Rule]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. A flame shall be present at all times when combustible gases are vented through this flare. [District Rule 2201]
5. Sulfur compound concentration of gas combusted shall not exceed 1.0 gr S/100 scf (16.9 ppmv H2S). [District Rule 2201]
6. Flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods
   aggregating more than three minutes in any one hour. [District Rules 2201]
7. Flare shall be equipped with total gas volume flow meter. [District Rule 2201]
8. Maximum amount of gas combusted shall not exceed 3672 MMBtu/day. [District Rule 2201]
9. Maximum amount of gas combusted shall not exceed 4107,640 MMBtu/yr. [District Rule 2201]
10. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2):
    0.036 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.370 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201]
11. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
Central Regional Office • 1980 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
12. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities <10,000 ppmv screening value ranges emissions factors. [District Rule 2201]

13. VOC fugitive emissions from flare shall not exceed 0.4 lb/day. [District Rule 2201]

14. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081, 7.2 and 2201]

15. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

16. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201]

17. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201]

18. Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201]

19. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

20. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

21. {2901} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. NOx emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]

22. {2902} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. CO emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305]

23. {1560} Stack gas oxygen shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4305]

24. VOC content shall be determined using methods ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]

25. This unit shall be tested for compliance with the NOx, CO, and VOC emissions limits at startup. [District Rule 2201]

26. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

27. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

28. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

29. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOCs at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]
30. {3472} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector’s name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

31. {3473} Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

32. {3474} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

33. {3471} All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]

34. ATC C-76-71-10 will be canceled upon implementation of this ATC. [District Rule 2201]
AUTHORITY TO CONSTRUCT

PERMIT NO: C-7671-17-0

LEGAL OWNER OR OPERATOR: EXARO ENERGY LLC
MAILING ADDRESS: 800 GEESNER, SUITE 900
HOUSTON, TX 77024

LOCATION: GAS PROCESSING PLANT
KETTLEMAN, CA

EQUIPMENT DESCRIPTION:
145 BHP CATERPILLAR, MODEL 3306, NATURAL GAS FIRED INTERNAL COMBUSTION ENGINE EQUIPPED WITH A 3-WAY CATALYST POWERING A COMPRESSOR

CONDITIONS

1. {271} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components. [District Rule 2201]
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201]
7. VOC fugitive emissions shall not exceed 0.3 lb/day. [District Rule 2201]
8. The engine shall be fired solely on natural gas with a sulfur content not exceeding 1.0 gr/100 scf. [District Rules 2201 and 4801]
9. Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NOx @ 15% O2, 0.052 g-PM10/hp-hr, 600 ppmvd CO @ 15% O2, or 25 ppmvd VOC @ 15% O2. [District Rules 2201 and District Rule 4702]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
C-7671-17-0: Sep 30, 2018 2:37PM • DAVIDSOS • New Inspection NOT Required
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
10. This engine shall be equipped with a nonresettable fuel meter. The fuel meter shall be calibrated periodically per the recommendations of the manufacturer. [District Rule 4702, 5.6.6]

11. {3202} This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]

12. NOx, CO, and VOC emissions shall be measured (source tested) at startup and every 24 months thereafter. [District Rule 2201 and 4702]

13. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

14. {110} The results of each source test shall be submitted to the District within 60 days thereof. [District Rule 1081]

15. The following test methods shall be used for testing other than start-up testing: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702]

16. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081, 7.2 and 2201]

17. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081]

18. {3794} The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O2 monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702]

19. {3786} If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702]

20. {3787} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702]

21. {3788} The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702]

CONDITIONS CONTINUE ON NEXT PAGE
22. The permittee shall maintain an engine operating log to demonstrate compliance for this engine. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data (quarterly monitoring data unless conducting monthly monitoring), compliance source test results (conducted every 24 months), and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet. [District Rule 4702]

23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]

24. {3212} The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]

25. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409]

26. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]

27. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]

28. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]

29. {3472} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409, 6.2.1]

30. {3473} Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409, 6.2.2]

31. {3474} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409, 6.2.3]

32. {3471} All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409, 6.2.4]