San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JAN 13 2016

Mr. Juan Campos
California Resources Elk Hills LLC
28590 Hwy 119
Tupman, CA 93276

Re: Notice of Preliminary Decision – ATC / Certificate of Conformity
District Facility # S-2234
Project # 1153552

Dear Mr. Campos:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes modifications to a gas plant.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM: rue/ya

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

Printed on recycled paper.

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Revise Fugitive Emissions from Cryogenic Gas Plant

Facility Name:	California Resources Elk Hills, LLC	Date:	December 22, 2015
Mailing Address:	10800 Stockdale Hwy	Engineer:	Richard Edgehill
	Bakersfield, CA 93311	Lead Engineer:	Richard Karrs
Contact Person:	Juan Campos		
Telephone:	(661) 763-6354		
Fax:	(661) 763-6681		
E-Mail:	Juan.Campos@crc.com		
Application #(s):	S-2234-216-1 through '-229-1, '-230-4, '-231-1, '-232-1, '-233-2 through '-235-2, '-236-1 through '-238-1, '-239-2, '-245-1, '-246-1, and '-248-1		
Project #:	1153552		
Deemed Complete:	September 9, 2015		

I. Proposal

California Resources Elk Hills, LLC (CREH) is requesting Authorities to Construct (ATC) to authorize modification of twenty-six (26) Permits to Operate (PTO) and reauthorization of one (1) ATC. The modification will increase the maximum allowable leak limits for fugitive emissions from 2,000 ppm up to 10,000 ppm. The modification will also allow for a specified percentage of allowed leaking (>10,000 ppm) components to be discovered and repaired within prescribed timeframes. Note that the existing BACT leak repair threshold conditions will not be changed.

The project results in an increase in fugitive emissions of VOCs triggering BACT. Offsets and public notice are also required.

Disposition of Outstanding ATCs

ATCs S-2234-218-0 will be implemented before the proposed ATC '-218-1. Current PTOs are included in **Attachment I**.

CREH received their Title V Permit on April 30, 1999. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. CUSA must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (04/21/11)
Rule 2410	Prevention of Significant Deterioration (06/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities (04/20/2005)
Rule 4623	Storage of Organic Liquids
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

III. Project Location

The emissions units are located in Section 14 Township 30S Range 22E and Section 35 Township 30S Range 23E in the Elk Hills Oil Field. The site is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification is not required.

IV. Process Description

The affected equipment are included in a natural gas processing plant.

V. Equipment Listing

Pre-Project Equipment

S-2234-216-0: INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S)

S-2234-217-0: MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED

ATC S-2234-218-0: O2 REMOVAL SYSTEM WITH 19.5 MMBTU/HR O2 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT) , OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND O2 REMOVAL COOLER

S-2234-219-0: INLET GAS TREATING WITH INLET GAS AMINE CONTACTOR, TREATED GAS COOLER, LEAN GLYCOL COOLER, TREATED GAS FILTER SEPARATOR

S-2234-220-0: INLET GAS DEHYDRATION WITH MOLECULAR SIEVE DEHYDRATION, DRY GAS DUST FILTER, REGENERATION GAS HEATER, REGENERATION GAS COOLER AND SCRUBBER, AND REGENERATION GAS COOLER

S-2234-221-0: NGL RECOVERY WITH EXPANDER/BOOSTER COMPRESSOR, GAS/GAS EXCHANGER, COLD SEPARATOR, DEMETHANIZER REBOILERS, DEMETHANIZER, AND DEETHANIZER FEED PUMPS

S-2234-222-0: RESIDUE GAS COMPRESSION WITH ELECTRIC MOTOR DRIVEN RESIDUE GAS COMPRESSOR(S), RESIDUE GAS COALESCER(S)

S-2234-223-0: DEETHANIZER WITH REFLUX CONDENSER

S-2234-224-0: DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS
S-2224-225-0: DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS

S-2234-226-0: REFRIGERATION SYSTEM WITH REFRIGERANT SUCTION SCRUBBER, REFRIGERANT COMPRESSOR(S) AND COMPRESSOR COMPONENTS, REFRIGERANT FLASH DRUM, REFRIGERANT CONDENSERS AND COMPONENTS, AND REFRIGERANT SURGE DRUM

S-2234-227-0: AMINE SYSTEM WITH AMINE REGENERATION PACKAGE

S-2234-228-0: GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE

S-2234-229-0: PROPANE TANK (EXEMPT), BUTANE TANK (EXEMPT), AND 16,250 GALLON NATURAL GAS TANK

S-2234-230-0: HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT)

S-2234-231-0: OVERHEAD GAS SYSTEM WITH GAS SCRUBBER, ETHANE/CO2 GLYCOL CONTACTOR, ETHANE/CO2 COMPRESSOR(S), ETHANE COOLERS AND ETHANE COOLER COMPONENTS

S-2234-232-0: METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK

S-2234-233-0: 2000 GALLON AMINE SUMP TANK

S-2234-234-0: 3000 GALLON GLYCOL SUMP TANK

S-2234-235-0: 250 MMSCF/DAY EMERGENCY USE SMOKELESS SONIC FLARE WITH FLARE HEADER AND FLARE KNOCK OUT DRUM

S-2234-236-0: 300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-237-0: 300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-238-0: 500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-239-1: 500 BBL SLOP OIL TANK

S-2234-245-0: AMINE TREATING SYSTEM WITH AMINE CONTACTOR; AMINE REGENERATION SYSTEM WITH RE-BOILER HEATED BY HOT OIL SYSTEM; WITH FLASH VESSEL AND AMINE REGENERATION OVERHEAD VAPORS ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

S-2234-246-0: ELECTRICALLY HEATED GLYCOL DEHYDRATION UNIT WITH VAPORS FROM FLASH VESSEL AND STILL VENT ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

S-2234-248-0: 2000 GALLON HORIZONTAL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM WITH VAPORS RETURNED TO A PROCESS STREAM OR TO A GAS GATHERING SYSTEM

Proposed Modification:

S-2234-216-1: MODIFICATION OF INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-217-1: MODIFICATION OF MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-218-1: MODIFICATION OF O2 REMOVAL SYSTEM WITH 19.5 MMBTU/HR O2 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT) , OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND O2 REMOVAL COOLER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-219-1: MODIFICATION OF INLET GAS TREATING WITH INLET GAS AMINE CONTACTOR, TREATED GAS COOLER, LEAN GLYCOL COOLER, TREATED GAS FILTER SEPARATOR: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-220-1: MODIFICATION OF INLET GAS DEHYDRATION WITH MOLECULAR SIEVE DEHYDRATION, DRY GAS DUST FILTER, REGENERATION GAS HEATER, REGENERATION GAS COOLER AND SCRUBBER, AND REGENERATION GAS COOLER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-221-0: MODIFICATION OF NGL RECOVERY WITH EXPANDER/BOOSTER COMPRESSOR, GAS/GAS EXCHANGER, COLD SEPARATOR,

DEMETHANIZER REBOILERS, DEMETHANIZER, AND DEETHANIZER FEED PUMPS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-222-1: MODIFICATION OF RESIDUE GAS COMPRESSION WITH ELECTRIC MOTOR DRIVEN RESIDUE GAS COMPRESSOR(S), RESIDUE GAS COALESCER(S): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-223-1: MODIFICATION OF DEETHANIZER WITH REFLUX CONDENSER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-224-1: MODIFICATION OF DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2224-225-1: MODIFICATION OF DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-226-1: MODIFICATION OF REFRIGERATION SYSTEM WITH REFRIGERANT SUCTION SCRUBBER, REFRIGERANT COMPRESSOR(S) AND COMPRESSOR COMPONENTS, REFRIGERANT FLASH DRUM, REFRIGERANT CONDENSERS AND COMPONENTS, AND REFRIGERANT SURGE DRUM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-227-1: MODIFICATION OF AMINE SYSTEM WITH AMINE REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-228-1: MODIFICATION OF GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-229-1: MODIFICATION OF PROPANE TANK (EXEMPT), BUTANE TANK (EXEMPT), AND 16,250 GALLON NATURAL GAS TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-230-4: MODIFICATION OF HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-231-1: MODIFICATION OF OVERHEAD GAS SYSTEM WITH GAS SCRUBBER, ETHANE/CO2 GLYCOL CONTACTOR, ETHANE/CO2 COMPRESSOR(S), ETHANE COOLERS AND ETHANE COOLER COMPONENTS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-232-1: MODIFICATION OF METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-233-2: MODIFICATION OF 2000 GALLON AMINE SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-234-2: MODIFICATION OF 3000 GALLON GLYCOL SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-235-2: MODIFICATION OF 250 MMSCF/DAY EMERGENCY USE SMOKELESS SONIC FLARE WITH FLARE HEADER AND FLARE KNOCK OUT DRUM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-236-1: MODIFICATION OF 300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-237-1: MODIFICATION OF 300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-238-1: MODIFICATION OF 500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-239-2: MODIFICATION OF 500 BBL SLOP OIL TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-245-1: MODIFICATION OF AMINE TREATING SYSTEM WITH AMINE CONTACTOR; AMINE REGENERATION SYSTEM WITH RE-BOILER HEATED BY HOT OIL SYSTEM; WITH FLASH VESSEL AND AMINE REGENERATION OVERHEAD VAPORS ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-246-1: MODIFICATION OF ELECTRICALLY HEATED GLYCOL DEHYDRATION UNIT WITH VAPORS FROM FLASH VESSEL AND STILL VENT ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

S-2234-248-1: MODIFICATION OF 2000 GALLON HORIZONTAL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM WITH VAPORS RETURNED TO A PROCESS STREAM OR TO A GAS GATHERING SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

Post Project Equipment Description:

S-2234-216-1: INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S)

S-2234-217-1: MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED

S-2234-218-1: O2 REMOVAL SYSTEM WITH 19.5 MMBTU/HR O2 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT) , OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND O2 REMOVAL COOLER

S-2234-219-1: INLET GAS TREATING WITH INLET GAS AMINE CONTACTOR, TREATED GAS COOLER, LEAN GLYCOL COOLER, TREATED GAS FILTER SEPARATOR

S-2234-220-1: INLET GAS DEHYDRATION WITH MOLECULAR SIEVE DEHYDRATION, DRY GAS DUST FILTER, REGENERATION GAS HEATER, REGENERATION GAS COOLER AND SCRUBBER, AND REGENERATION GAS COOLER

S-2234-221-1: NGL RECOVERY WITH EXPANDER/BOOSTER COMPRESSOR, GAS/GAS EXCHANGER, COLD SEPARATOR, DEMETHANIZER REBOILERS, DEMETHANIZER, AND DEETHANIZER FEED PUMPS

S-2234-222-1: RESIDUE GAS COMPRESSION WITH ELECTRIC MOTOR DRIVEN RESIDUE GAS COMPRESSOR(S), RESIDUE GAS COALESCER(S)

S-2234-223-1: DEETHANIZER WITH REFLUX CONDENSER

S-2234-224-1: DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS

S-2224-225-1: DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS

S-2234-226-1: REFRIGERATION SYSTEM WITH REFRIGERANT SUCTION SCRUBBER, REFRIGERANT COMPRESSOR(S) AND COMPRESSOR COMPONENTS, REFRIGERANT FLASH DRUM, REFRIGERANT CONDENSERS AND COMPONENTS, AND REFRIGERANT SURGE DRUM

S-2234-227-1: AMINE SYSTEM WITH AMINE REGENERATION PACKAGE

S-2234-228-1: GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE

S-2234-229-1: PROPANE TANK (EXEMPT), BUTANE TANK (EXEMPT), AND 16,250 GALLON NATURAL GAS TANK

S-2234-230-4: HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT)

S-2234-231-1: OVERHEAD GAS SYSTEM WITH GAS SCRUBBER, ETHANE/CO2 GLYCOL CONTACTOR, ETHANE/CO2 COMPRESSOR(S), ETHANE COOLERS AND ETHANE COOLER COMPONENTS

S-2234-232-1: METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK

S-2234-233-2: 2000 GALLON AMINE SUMP TANK

S-2234-234-2: 3000 GALLON GLYCOL SUMP TANK

S-2234-235-2: 250 MMSCF/DAY EMERGENCY USE SMOKELESS SONIC FLARE WITH FLARE HEADER AND FLARE KNOCK OUT DRUM

S-2234-236-1: 300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-237-1: 300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-238-1: 500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

S-2234-239-2: 500 BBL SLOP OIL TANK

S-2234-245-1: AMINE TREATING SYSTEM WITH AMINE CONTACTOR; AMINE REGENERATION SYSTEM WITH RE-BOILER HEATED BY HOT OIL SYSTEM; WITH FLASH VESSEL AND AMINE REGENERATION OVERHEAD VAPORS ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

S-2234-246-1: ELECTRICALLY HEATED GLYCOL DEHYDRATION UNIT WITH VAPORS FROM FLASH VESSEL AND STILL VENT ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

S-2234-248-1: 2000 GALLON HORIZONTAL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM WITH VAPORS RETURNED TO A PROCESS STREAM OR TO A GAS GATHERING SYSTEM

VI. Emission Control Technology Evaluation

All emissions units are controlled by vapor collection and control technology or designed to prevent release of liquids or vapors to atmosphere. All components handling crude oil and gas are subject to the leak detection and repair (LDAR) requirements of SJVUAPCD Rule 4409. A

LDAR program exists at the facilities and ensures inspections and repairs are conducted as prescribed by the permits and Rule 4409.

Fugitive Emissions BACT Requirement

As described below BACT is triggered for several of the permits. BACT is a leak definition of (3) drops per minute of liquid containing VOC or a reading of methane in excess of 100 ppmv (valves and connectors) and 500 ppmv (compressor and pump seals) and an Inspection and Maintenance Program (I&M) pursuant to District Rule 4409 (BACT Requirement).

VII. General Calculations

A. Assumptions

- Facility operates 24 hr/day 365 days per year.
- Only fugitive emissions of VOC change with the project and therefore PE1 and PE2 combustion emissions are not addressed.
- VOC content for fugitive emissions calculations is listed in the table below. Applicant has stated (9-16-15 email) that samples for VOC analysis will be taken from locations as listed in the table below.

Fugitive Emissions

Permit unit	% VOC	Sample Location
'-216 Inlet Gas System	23	Inlet Gas
'-217 Mercury Removal System	23	Inlet Gas
'-218 O2 Removal System	23	Inlet Gas
'-219 Inlet Gas Treating	23	Inlet Gas
'-220 Inlet Gas Dehydration	23	Inlet Gas
'-221 NGL Recovery	22	Dry Gas to Cryo
'-222 Residue Gas Compression	5	Residue Gas
'-223 Deethanizer	74	Deethanizer Feed
'-224 Depropanizer	100	Not Applicable
'-225 Debutanizer	100	Not Applicable
'-226 Refrigeration System	100	Not Applicable
'-227 Amine System	21	Amine Inlet
'-228 Glycol Regeneration	23	Inlet Gas
'-229 Propane, Butane, Natural Gas Storage	100	Not Applicable
'-230 Hot Oil System	100	Not Applicable
'-231 Overhead Gas System and Overhead Gas Scrubber	18	Ethane/Co2 Overhead
'-232 Methanol Injection System	100	Not Applicable
'-233 Amine Sump	21	Amine Inlet
'-234 Glycol Sump	23	Inlet Gas
'-235 Flare System	16	Flare Gas
'-236 Amine Tank	37	14Z Amine Inlet
'-237 Water Tank	23	14Z Inlet Gas
'-238 Produced Water Tank	23	14Z Inlet Gas
'-239 Slop Oil Tank	23	14Z Inlet Gas
'-245	23	14Z Inlet Gas
'-246	23	14Z Inlet Gas
'-248	23	14Z Inlet Gas

B. Emission Factors

Pre-Project

Fugitive VOC emissions have been quantified for Average Leak Rate (ALR) equations with a 2000 ppmv leak threshold (other equipment) in EPA, "Protocol for Estimating Leak Emissions" (EPA – 453/R-95-017, November 1995) Table 5-7, "Equation Relating Average Leak Rate to Fraction Leaking at Oil and Gas Production Operation Units." In calculating the DEL associated with fugitive emissions, the "LKFRAC" term in these equations, representing the number of allowable leaks, was assumed to be zero.

Post-Project

Emissions were calculated using "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."

The fugitive emissions factors and calculations are included in **Attachment II**.

C. Calculations

1. Pre Project Potential to Emit (PE1)

The pre-project potential to emit for the emissions units is summarized in the table below:

O2 Heater S-2234-218

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_X	0.007	19.5	24	3.3
SO_X	0.00269	19.5	24	1.3
PM_{10}	0.0076	19.5	24	3.6
CO	0.037	19.5	24	17.3
VOC	0.0055	19.5	24	2.6

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_X	0.007	19.5	8,760	1,196
SO_X	0.00269	19.5	8,760	460
PM_{10}	0.0076	19.5	8,760	1,298
CO	0.037	19.5	8,760	6,320
VOC	0.0055	19.5	8,760	940

Hot Oil Heater S-2234-230-0

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_X	0.006	206.7	24	30.8
SO_X	0.00269	206.7	24	13.3
PM_{10}	0.0076	206.7	24	37.7
CO	0.037	206.7	24	183.5
VOC	0.0055	206.7	24	27.3

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_X	0.006	206.7	8,760	11,226
SO_X	0.00269	206.7	8,760	4,871
PM_{10}	0.0076	206.7	8,760	13,761
CO	0.037	206.7	8,760	66,996
VOC	0.0055	206.7	8,760	9,959

S-2234-235: Emergency Flare – One day/yr operate as emergency

The daily potential to emit for the flare is calculated as follows, and summarized in the table below:

$PE2_{NOx}$ = (0.068 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 18,054.0 lb-NO_X/day

$PE2_{SOx}$ = (0.00269 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 714.2 lb-SO_X/day

$PE2_{PM10}$ = (0.008 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 2,124.0 lb-PM_{10}/day

$PE2_{CO}$ = (0.37 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 98,235.0 lb-CO/day

$PE2_{VOC}$ = (0.063 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 16,726.5 lb-VOC/day

PE1

PTO/ATC	VOC Lbs/Day	VOC Lbs/Year
S-2234-216	2.6	963
S-2234-217	0.2	75
S-2234-218	2.6 (combustion) + 0.3 (ATC has 0.2) = 2.9	940 (combustion) + 93 (fugitives) =1,033
S-2234-219	0.6	208
S-2234-220	0.4	131
S-2234-221	0.5	169
S-2234-222	0.2	65
S-2234-223	0.1	35
S-2234-224	0.7	264
S-2234-225	0.5	190
S-2234-226	1.9	685
S-2234-227	0.2	75
S-2234-228	0.2	86
S-2234-229	0.9	341
S-2234-230	27.3 (combustion) + 0.2 (fugitives) = 27.9	9,959 (combustion) + 69 (fugitives) 10,028
S-2234-231	1.1	415
S-2234-232	0.1	26
S-2234-233	0.0	14
S-2234-234	0.4	152
S-2234-235	16,726.5 (combustion) + 0.2 (fugitives) = 16,726.7	59
S-2234-236	0.0	13
S-2234-237	0.0	3
S-2234-238	0.0	4
S-2234-239	0.1	37
S-2234-245	1.0	374
S-2234-246	0.6	231
S-2234-248	0.3	102
Total		15,778

2. Post Project Potential to Emit (PE2)

The post-project potential to emit for the emissions units is summarized in the table below:

O2 Heater S-2234-218

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_X	0.007	19.5	24	3.3
SO_X	0.00269	19.5	24	1.3
PM_{10}	0.0076	19.5	24	3.6
CO	0.037	19.5	24	17.3
VOC	0.0055	19.5	24	2.6

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_X	0.007	19.5	8,760	1,196
SO_X	0.00269	19.5	8,760	460
PM_{10}	0.0076	19.5	8,760	1,298
CO	0.037	19.5	8,760	6,320
VOC	0.0055	19.5	8,760	940

Hot Oil Heater S-2234-230-0

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_X	0.006	206.7	24	30.8
SO_X	0.00269	206.7	24	13.3
PM_{10}	0.0076	206.7	24	37.7
CO	0.037	206.7	24	183.5
VOC	0.0055	206.7	24	27.3

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_X	0.006	206.7	8,760	11,226
SO_X	0.00269	206.7	8,760	4,871
PM_{10}	0.0076	206.7	8,760	13,761
CO	0.037	206.7	8,760	66,996
VOC	0.0055	206.7	8,760	9,959

S-2234-235: Emergency Flare – One day/yr operate as emergency

The daily potential to emit for the flare is calculated as follows, and summarized in the table below:

$PE2_{NOx}$ = (0.068 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 18,054.0 lb-NO_X/day

$PE2_{SOx}$ = (0.00269 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 714.2 lb-SO_X/day

$PE2_{PM10}$ = (0.008 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 2,124.0 lb-PM_{10}/day

$PE2_{CO}$ = (0.37 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 98,235.0 lb-CO/day

$PE2_{VOC}$ = (0.063 lb/MMBtu) * (1,062 MMBtu/ MMscf) * (250 MMscf/day)
= 16,726.5 lb-VOC/day

PE2

PTO/ATC	VOC Lbs/Day	VOC Lbs/Year
S-2234-216	7.0	2,560
S-2234-217	1.8	640
S-2234-218	2.5 (combustion) + 2.6 (fugitives) = 5.1	928 (combustion) + 940 (fugitives) = 1,868
S-2234-219	2.7	1000
S-2234-220	2.6	960
S-2234-221	2.9	1,060
S-2234-222	0.3	100
S-2234-223	2.6	960
S-2234-224	12.2	4,460
S-2234-225	11.9	4320
S-2234-226	21.6	7880
S-2234-227	2.4	860
S-2234-228	2.6	960
S-2234-229	26.2	9580
S-2234-230	27.3 (combustion) + 11.7 (fugitives) = 39.0	9,959 (combustion) + 4,260 (fugitives) = 14,219
S-2234-231	2.1	760
S-2234-232	7.5	2720
S-2234-233	0.8	300
S-2234-234	0.9	340
S-2234-235	16,726.5 (combustion) + 1.3 (fugitives) = 16,727.8	0 (combustion) + 460 (fugitives) = 460
S-2234-236	1.4	520
S-2234-237	1.7	620
S-2234-238	1.7	620
S-2234-239	1.2 (tank) + 0.3 (VRS) = 1.5	420 tank) + 117 (VRS) = 537
S-2234-245	12.1	4420
S-2234-246	6.5	2380
S-2234-248	1.2 (tank) + 0.8 (VRS) = 2.0	420 (tank) + 274 (VRS) = 694
Total		65,798

Emissions Profiles are included in **Attachment III.**

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.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary.

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.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
SSPE1	1,368,657	87,234	225,254	225,254	7,219,571	3,358,601
SSPE2	1,368,657	87,234	225,254	225,254	7,219,571	3,358,601 + (65,798 – 15,778) = 3,408,621
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	Yes	No	Yes	Yes	Yes	Yes

*9/17/15 SSPE calculator

Note: PM2.5 assumed to be equal to PM10, emissions from SSPE calculator 9-17-15

This source is an existing Major Source for NOx, SOx, PM10, CO, and VOC emissions and will remain a Major Source for these air contaminants.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	684					
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y					

As shown above, the facility is an existing PSD major source for at least one pollutant (VOCs).

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.

The subject permits units satisfy Achieved-in-Practice BACT Guideline 7.2.1 for Natural Gas Processing Plant - Valves, Connectors, and Compressor and Pump Seals (Subject to Rule 4409) $\leq$ 100 MMscf/day. Therefore BE = PE1.

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."

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the SB 288 Major Modification calculation. The project is not a SB288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination. The project is not a Federal Major Modification.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be an existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

10. 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. The QNEC is listed in the table below.

PTO/ATC	PE 1 lbs/yr	PE2 lbs/yr	QNEC lbs/qtr
S-2234-216	963	2,560	399
S-2234-217	75	640	141
S-2234-218	1,033	1,868	209
S-2234-219	208	1000	198
S-2234-220	131	960	207
S-2234-221	169	1060	223
S-2234-222	65	100	9
S-2234-223	35	960	231
S-2234-224	264	4,460	1049
S-2234-225	190	4320	1033
S-2234-226	685	7880	1799
S-2234-227	75	860	196
S-2234-228	86	960	219
S-2234-229	341	9580	2310
S-2234-230	10,028	14,219	1048
S-2234-231	415	760	86
S-2234-232	26	2720	674
S-2234-233	14	300	72
S-2234-234	152	340	47
S-2234-235	59	460	100
S-2234-236	13	520	127
S-2234-237	3	620	154
S-2234-238	4	620	154
S-2234-239	37	537	125
S-2234-245	374	4420	1012
S-2234-246	231	2380	537
S-2234-248	102	694	148

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

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. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

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 an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

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.

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 PE 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))

PTO/ATC	PE 1 (lbs/day)	PE2 (lbs/day)	AIPE (lb/day)	BACT For this project?*	Current PTO/ATC BACT Conditions
S-2234-216	2.6	7.0	4.4	Yes	7.2.7
S-2234-217	0.2	1.8	1.6	No	7.2.7
S-2234-218	0.3	5.1	4.8	Yes	Rule 4320 Requirements and 7.2.7
S-2234-219	0.6	2.7	2.1	Yes	7.2.7
S-2234-220	0.4	2.6	2.2	Yes	7.2.7
S-2234-221	0.5	2.9	2.4	Yes	7.2.7
S-2234-222	0.2	0.3	0.1	No	7.2.7
S-2234-223	0.1	2.6	2.5	Yes	7.2.7
S-2234-224	0.7	12.2	11.5	Yes	7.2.7
S-2234-225	0.5	11.9	11.4	Yes	7.2.7
S-2234-226	1.9	21.6	19.7	Yes	7.2.7
S-2234-227	0.2	2.4	2.2	Yes	7.2.7
S-2234-228	0.2	2.6	2.4	Yes	7.2.7
S-2234-229	0.9	26.2	25.3	Yes added 7.2.7 condition	7.3.1
S-2234-230	0.2	39.0	38.8	Yes	Rule 4320 Requirements and 7.2.7
S-2234-231	1.1	2.1	1.0	No	7.2.7
S-2234-232	0.1	7.5	7.4	Yes	7.2.7
S-2234-233	0.0	0.8	0.8	No	7.2.7 and 7.3.1
S-2234-234	0.4	0.9	0.5	No	7.2.7 and 7.3.1
S-2234-235	16,726.7	16,727.8	1.1	No	1.4.2 and 7.2.7
S-2234-236	0.0	1.4	1.4	No	7.3.1
S-2234-237	0.0	1.7	1.7	No	7.3.1
S-2234-238	0.0	1.7	1.7	No	7.3.1
S-2234-239	0.1	1.5	1.4	No	7.3.1
S-2234-245	1.0	12.1	11.1	Yes added 7.2.7 condition	None
S-2234-246	0.6	6.5	5.9	Yes added 7.2.7 condition	None
S-2234-248	0.3	2.0	1.7	No	None

*BACT Guidelines
1.4.2 Waste Gas Flare Incinerating Produced Gas
3.1.1 Emergency Diesel I.C. Engine
7.2.7 Natural Gas Processing Plant – Valves, Connectors, and Compressor and Pump Seals (Subject to Rule 4409) ≤ 100 MMscf/day
7.3.1 Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity

PTO/ATC	PE 1 lbs/day	PE2 lbs/day	AIPE	BACT?*
S-2234-216	2.6	7.0	4.4	Yes
S-2234-217	0.2	1.7	1.5	No
S-2234-218	0.3	2.5	2.2	Yes
S-2234-219	0.6	2.7	2.1	Yes
S-2234-220	0.4	9.0	8.6	Yes
S-2234-221	0.5	2.5	2.0	Yes
S-2234-222	0.2	0.3	0.1	No
S-2234-223	0.1	2.6	2.5	Yes
S-2234-224	0.7	12.1	11.4	Yes
S-2234-225	0.5	11.8	11.3	Yes
S-2234-226	1.9	21.6	19.7	Yes
S-2234-227	0.2	2.3	2.1	Yes
S-2234-228	0.2	2.6	2.4	Yes
S-2234-229	0.9	26.2	25.3	Yes
S-2234-230	0.2	11.6	11.4	Yes
S-2234-231	1.1	2.1	1.0	No
S-2234-232	0.1	7.5	7.6	Yes
S-2234-233	0.0	0.8	0.8	No
S-2234-234	0.4	0.9	0.5	No
S-2234-235	0.2	1.2	1.0	No
S-2234-236	0.0	1.4	1.4	No
S-2234-237	0.0	1.7	1.7	No
S-2234-238	0.0	1.7	1.7	No
S-2234-239	0.1	1.5	1.4	No
S-2234-245	1.0	12.1	11.1	Yes
S-2234-246	0.6	6.5	5.9	Yes
S-2234-248	0.3	2.0	1.7	No

*AIPE exceeding 2.0 lb/day trigger BACT

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOCs for S-2234-216, '-218 thru '-221, '-223 through '-230, '-232, '-245, and '-246. Therefore BACT is triggered for these emissions units. If not already included on the current PTO (i.e '-229, '-245, '-246) the BACT requirement was added to these permit units.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for VOC emissions. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

BACT Guideline 7.2.7, applies to valves, connectors, compressor seals, and pump seals at natural gas processing plants (**Attachment IV**).

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

BACT has been satisfied with the following:

> VOC: Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 100 ppmv above background (for Valves and Connectors) and 500 ppmv (for Compressor and Pump Seals) when measured per EPA Method 21 from the potential source, and an Inspection and Maintenance Program pursuant to District Rule 4409.

The BACT Analysis is included in **Attachment V**.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

Since facility emissions are already above the Offset and Major Source Thresholds for VOC emissions, offset applicability calculations are not necessary.

2. Quantity of Offsets Required

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	- -	- -	- -	- -	3,408,621
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?					Yes

As seen above, the SSPE2 is greater than the offset thresholds for VOCs; therefore, offset calculations for VOCs will be required.

The quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 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 = HAE

The emissions units are clean emissions units since they meet the BACT standards of BACT Guideline 7.2.7. These units are located at a major source.

Therefore, BE = PE1.

Offsets Required (lb/year) = (PE2 – BE) x DOR

The ERCs proposed correspond to emissions reductions occurring greater than 15 miles from S-2234 (DOR = 1.5:1), the total amount of VOC ERCs that need to be withdrawn (see above table) is:

Offsets Required (lb/year) = (65,698 – 15,713) x 1.5
= 50,075 x 1.5
= 75,113 lb VOC/year (18,778.25 lb/qtr)

As shown in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Y	Y+1
.5	Y	Y	Y+1	Y+1
.75	Y	Y+1	Y+1	Y+1

Therefore the appropriate quarterly emissions to be offset are as follows:

Calculating the appropriate quarterly emissions to be offset is as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
18,778	18,778	18,778	18,779

The amount of VOC ERCs that need to be withdrawn for each permit unit is provided in the table below:

Offsets Required (lb/year) –non-combustion emissions*

Permit unit	PE2 (lb/yr)	PE1 (lb/yr)	IPE (lb/yr)	DOR	Offset (lbs-VOC /yr)	Offset (lbs-VOC /qtr)
S-2234-216	2,560	963	1,597	1.5	2,396	599
S-2234-217	640	75	565	1.5	848	212
S-2234-218	1,868	1,033	835	1.5	1253	313.25 (313,313,313,314)
S-2234-219	1000	208	792	1.5	1188	297
S-2234-220	960	131	829	1.5	1244	311
S-2234-221	1060	169	891	1.5	1337	334.25 (334,334,334,335)
S-2234-223	960	35	925	1.5	1388	347
S-2234-224	4,460	264	4196	1.5	6294	1573.5 (1573,1573,1574,1574)
S-2234-225	4320	190	4130	1.5	6195	1548.75 (1548,1549,1549,1549)
S-2234-226	7880	685	7195	1.5	10,793	2698.25 (2698,2698,2698,2699)
S-2234-227	860	75	785	1.5	1178	294.5 (294,294,295,295)
S-2234-228	960	86	874	1.5	1311	327.75 (327,328,328,328)
S-2234-229	9580	341	9,329	1.5	13,994	3498.5 (3498,3498,3499,3499)
S-2234-230	14,219	10,028	4,191	1.5	6287	1571.75 (1571,1572,1572,1572)
S-2234-231	760	415	345	1.5	518	129.5 (129,129,130,130)
S-2234-232	2720	26	2,694	1.5	4041	1010.25 (1010,1010,1010,1011)
S-2234-233	300	14	286	1.5	429	107.25 (107,107,107,108)
S-2234-234	340	152	188	1.5	282	70.5 (70,70,71,71)
S-2234-235	460	59	401	1.5	602	150.5 (150,150,151,151)
S-2234-236	520	13	507	1.5	761	190.25 (190,190,190,191)
S-2234-237	620	3	617	1.5	926	231.5 (231,231,232,232)
S-2234-238	620	4	616	1.5	924	231
S-2234-239	537	37	500	1.5	750	187.5 (187,187,188,188)
S-2234-245	4420	374	4046	1.5	6069	1517.25 (1517,1517,1517,1518)
S-2234-246	2380	231	2149	1.5	3224	806
S-2234-248	694	102	592	1.5	888	222, 222, 222, 222
Total	**65,698**	**15,713**	**50,075**	1.5	**75,113**	(18,778,18,778,18,778,18,779)

*For '-222 District policy APR 1130 states that IPEs less than or equal to 0.5 lb/day (in bold type above) are to be set to zero for purposes of providing emission offsets. This change allows an IPE that rounds to 0.5 lb/day, e.g. less than 0.54 lb/day, to be set to zero for purposes of providing emission offsets.

Applicant has proposed use of the following ERCs for the project (please see table below). Note that 2nd and 3rd quarter ERCs on the left half of the table (in shaded area in

bold type) have been reallocated as indicated in the right half of the table which is allowed by Rule 2201 Section 4.13.8 i.e. AER for VOC that occurred from April through November (2nd and 3rd quarters) may be used to offset increases in VOC during any period of the year.

ERCs					ERCs with Reallocated 2nd and 3rd Qtrs				
S-3327-1	24	24	24	24	S-3327-1	24	24	24	24
S-0829-1	57	60	72	58	S-0829-1	57	60	72	58
S-2625-1	22	110	96	68	S-2625-1	22	110	96	68
S-3078-1	81	82	83	83	S-3078-1	81	82	83	83
S-3077-1	121	123	124	124	S-3077-1	121	123	124	124
S-3053-1	137	139	140	140	S-3053-1	137	139	140	140
S-1783-1	587	2	35	4	S-1783-1	587	2	35	4
S-1777-1	419	454	0	0	S-1777-1	419	454	0	0
S-1778-1	**0**	**1,021**	**0**	**0**	S-1778-1	0	255	510	256
S-1754-1	**0**	**653**	**619**	**0**	S-1754-1	0	518	377	377
S-1782-1	**454**	**464**	**398**	**0**	S-1782-1	454	330	532	0
S-4228-1	**443**	**456**	**316**	**463**	S-4228-1	443	322	450	463
S-1780-1	**0**	**1,678**	**0**	**0**	S-1780-1	230	530	529	389
S-1775-1	**604**	**591**	**0**	**577**	S-1775-1	604	295	296	577
S-2623-1	**0**	**895**	**988**	**68**	S-2623-1	489	490	490	482
S-2301-1	**55**	**1,046**	**1,416**	**172**	S-2301-1	675	670	670	674
S-4140-1	**19**	**2,065**	**2,847**	**12**	S-4140-1	1,235	1,236	1,236	1,236
S-3536-1	**44**	**2,319**	**3,256**	**356**	S-3536-1	1,495	1,494	1,493	1,493
S-3538-1	**0**	**2,333**	**3,325**	**626**	S-3538-1	1,571	1,571	1,571	1,571
S-3166-1	**842**	**2,545**	**2,372**	**659**	S-3166-1	1,605	1,605	1,604	1,604
S-3169-1	**193**	**2,665**	**3,573**	**520**	S-3169-1	1,737	1,738	1,738	1,738
S-2490-1	**0**	**2,806**	**3,570**	**1,534**	S-2490-1	1,978	1,977	1,977	1,978
S-1706-1	**2,314**	**5,505**	**6,449**	**2,760**	S-1706-1	2,314	5,505	4,649	4,560
S-3379-1	**386**	**6,020**	**8,655**	**1,509**	S-3379-1	5,886	2,895	4,030	3,759
Total	6,802	34,056	38,358	9,757	**Reallocation**	**22,164**	**22,425**	**22,726**	**21,658**
					Project ERCs required	**18,778**	**18,778**	**18,778**	**18,779**

Comparison of the sums of reallocated amounts in large bold type with the required ERCs (in the bottom 2 rows of the right half of the above table) indicate that the facility has sufficient ERC credits to fully offset the quarterly VOC emissions increases associated with this project.

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,

c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

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

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

As detailed in Section VIII.B.1 above, the SSPE1 is greater than the offset threshold for all pollutants; therefore, there were no thresholds surpassed with this project and public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x			0	20,000 lb/year	No
SO_x			0	20,000 lb/year	No
PM_{10}			0	20,000 lb/year	No
CO			0	20,000 lb/year	No
VOC	3,408,621	3,358,601	50,020	20,000 lb/year	Yes

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

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does not constitute a Title V Minor Modification. Therefore, public noticing for Title V Significant Modifications is not required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for VOC SSIPE greater than 20,000 lbs/year. 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)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. 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.

DELs for the emission units in this project will be included on the ATCs in the form of fugitive component emissions limits in lb VOC/day. The permittee will be required to maintain accurate records of fugitive component counts and resulting emission calculations to validate the DEL.

The following condition is included on the ATC:

Proposed Rule 2201 (DEL) Conditions:

S-2234-216 (example)

VOC fugitive emissions from the components in gas service on tank shall not exceed 7.0 lb/day. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

The project results in no change in source testing requirements for combustion equipment.

2. Monitoring

S-2234-216 through '-239

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Y

The project results in no change in monitoring requirements for combustion equipment.

3. Recordkeeping

S-2234-216 through '-240

The following permit condition will be listed on permit as follows:

{2983} 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 1070, 4305, 4306, and 4320]

4. Reporting

S-2234-216 through '-239

A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Y

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall 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. As there is no air quality standard for VOCs, an AAQA is not required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
   Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
   Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
   Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
   A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
   An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and

Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and

Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

The Title V Compliance Certification form is included in **Attachment VI**.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Pursuant to 40 CFR Part 60 Section 60.110b(a), *Applicability And Designation Of Affected Facility*, except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) (equivalent to 19,813 gal, 472 bbls) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

Pursuant to 40 CFR Part 60 Section 60.110b(b), this subpart does not apply to:

(a) storage vessels with a capacity greater than or equal to 151 m^3 (equivalent to 39,890 gal, 950 bbls) storing a liquid with a maximum True Vapor Pressure (TVP) less than 3.5 kilopascals (kPa) (equivalent to 0.5 psi) or

Permit Units	Tank Capacity (gal)	TVP (psia)	TVP Thresholds (psia)
S-2234-229 NGL Tank	16,250 gallons	Na	Exempt
S-2234-233 Amine Sump	2,000 gallons	Na	Exempt
S-2234-234 Glycol Sump	3,000 gallons	Na	Exempt
S-2234-236 Amine Storage Tank	300 bbls	Na	Exempt
S-2234-237 Fresh Water Tank	300 bbls	Na	Exempt

The produced water and slop oil tanks S-2234-238 and '-239 have a design capacity ≤ 1,589.874 m^3 (≤ 420,000 gallons) and store petroleum prior to custody transfer, therefore, S-2234-238 and '-239 are not subject to the subpart.

Subpart KKK—Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants.

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

Note that tanks are not subject to 40 CFR KKK because they are not part of a process unit and not used for the extraction of natural gas liquids. 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, O2 removal heater, and hot oil heater are fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. 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 one. According to the Technical Services Memo for this project (**Attachment VII**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-2234-216-1 '-229-1, 233-2 '-234-2, '-236-1, '-237-1, '-238-1, '-239-2, and '-245-1	0.32 per million (project)	No

The project is approvable without TBACT.

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.

S-2234-218 and '-230 O2 and Hot Oil Heaters
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.

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor: 0.0076 lb-PM10/MMBtu
Percentage of PM as PM10 in Exhaust: 100%
Exhaust Oxygen (O_2) Concentration: 3%

$$\text{Excess Air Correction to F Factor} = \frac{20.9}{(20.9 - 3)} = 1.17$$

$$GL = \left(\frac{0.0076\ lb-PM}{MMBtu} \times \frac{7{,}000\ grain}{lb-PM}\right) / \left(\frac{8{,}578\ ft^3}{MMBtu} \times 1.17\right)$$

$$GL = 0.0053\ grain/dscf < 0.1\ grain/dscf$$

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the permit as follows:

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

S-2324-240 Emergency Fire Water Pump IC Engine

$$0.127\ \frac{g}{hp \cdot hr} \times \frac{1\,hp \cdot hr}{2{,}542.5\,Btu} \times \frac{10^6\,Btu}{8578\,dscf} \times \frac{0.30\,Btu_{out}}{1\,Btu_{in}} \times \frac{15.43\,grain}{g} = 0.027\ \frac{grain}{dscf}$$

Since 0.027 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Compliance 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 ≤ 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 μm in diameter. The values in the following table are calculated using the hourly heat input of the O2 Removal heater and Hot Oil Heater and the emission factor for the respective pollutant.

District Rule 4301 Limits			
Pollutant	NO_2	Total PM	SO_2
ATC S-2324-18 (lb/hr)	0.007 lb/MMBtu x 19.5 MMBtu/hr = 0.14	0.0076/MMBtu x 19.5 MMBtu/hr = 0.15	0.00285/MMBtu x 19.5 MMBtu/hr = 0.056
ATC S-2324-30-0 (lb/hr)	0.0062 lb/MMBtu x 206.7 MM/hr = 1.28	0.0076/MMBtu x 206.7 MMBtu/hr = 1.57	0.00285/MMBtu x 206.7 MMBtu/hr = 0.59
Rule Limit (lb/hr)	140	10	200

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

Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr

S-2234-218 and'-230 O2 and Hot Oil Heaters

The units are currently operating in compliance with the rule, the project will not affect compliance status, and continued compliance is expected.

Rule 4311 Flares

Emergency flare S-2234-235 is currently operating in compliance with the rule, the project will not affect compliance status, and continued compliance is expected.

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

The proposed cryogenic gas plant is subject to the rule requirements as listed in the facility wide PTO S-2234-0-2. Compliance is expected.

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 amine storage tank, produced water tank, and fresh water tank will be connected to vapor control system vented to a gas pipeline. The expected control efficiency is 99%.

The following conditions will be included on the ATCs:

Vapor Controlled Amine, Produced Water and Fresh Water Tanks S-2234-236 through '-238

The tanks are currently operating in compliance with the rule, the project will not affect compliance status, and continued compliance is expected.

S-2234-239-0 Slop Oil Tank

Section 4.4 states that tanks exclusively receiving and/or storing an organic liquid with a true vapor pressure (TVP) less than 0.5 psia are exempt from all other requirements except for complying with TVP and API gravity testing provisions pursuant to section 6.2, recordkeeping provisions pursuant to section 6.3.6, test methods provisions pursuant to section 6.4, and compliance schedules pursuant to section 7.2.

The facility has proposed to meet TVP of less than 0.5 psi for the organic liquid stored in the tank. No change to the TVP testing requirements is proposed.

S-2234-233 and '-234 Amine and Glycol Sumps

Testing is not be required for these uncontrolled sumps as they will store only triethylene glycol and methyl/diethanolamine with known vapor pressures.

Compliance is expected with this Rule.

Rule 4801 Sulfur Compounds

The gas combusted in the IC engine, O2 heater, hot oil heater, 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 Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

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.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying project complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

District CEQA Findings

The District determined that no other agency has broader discretionary approval power over this project (S-1153552) for Facility ID S-2234, previously known as the Cryogenic

Natural Gas Processing Plant, and that the District is the Lead Agency for the project (CEQA Guidelines §15051(b).

In 2010, the District determined that as a result of project design elements, District permit requirements and surrendering emission reduction credits, impacts on air quality for the Cryogenic Natural Gas Processing Plant would be reduced to less than significant. The District prepared a Negative Declaration (ND) for the Cryogenic Natural Gas Processing Plant project, and adopted the ND on December 1, 2010.

This project (S-1153552) is to modify the permits to encompass existing leakage emission rates as permit conditions instead of the applicant requesting a variance from the District for non-compliance to permits. The District determined that this modification is consistent with the ND adopted in 2010 and the District's engineering evaluation of the project (this document) determined that compliance with District rules and permit conditions would reduce and mitigate the project's potential air quality impacts to less than significant.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct S-2234-216-1 through '-229-1, '-230-4, '-231-1, '-232-1, '-233-2 through '-235-2, '-236-1 through '-238-1, '-239-2, '-245-1, '-246-1, and '-248-1 subject to the conditions included on the attached draft Authorities to Construct in **Attachment XIII**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-2234-216	3020-01H	26,900 hp	$1080.00
S-2234-217	3020-06	miscellaneous	$111.00
S-2234-218	3020-02H	19.5 MMBtu/hr	$1080.00
S-2234-219	3020-01D	120 hp	$330.00
S-2234-220	3020-01A	30 hp	$123.00
S-2234-221	3020-01H	4043 hp	$1080.00
S-2234-222	3020-01H	20,100 hp	$1080.00
S-2234-223	3020-01D	120 hp	$330.00
S-2234-224	3020-01F	600 hp	$637.00
S-2234-225	3020-01E	280 hp	$432.00
S-2234-226	3020-01H	11,700 hp	$1080.00
S-2234-227	3020-06	miscellaneous	$111.00
S-2234-228	3020-01A	17.5 hp	$92.00
S-2234-229	3020-01G	1210 hp	$855.00
S-2234-230	3020-02H	206.7 MMBtu/hr	$1080.00
S-2234-231	3010-01H	7,600 hp	$1080.00
S-2234-232	3020-01A	10 hp	$92.00
S-2234-233	3020-05A	2000 gallons	$79.00
S-2234-234	3020-05A	3000 gallons	$79.00
S-2234-235	3020-02H	11,156 MMBtu/hr	$1080.00
S-2234-236	3020-05B	12,600 gallons	$98.00
S-2234-237	3020-05B	12,600 gallons	$98.00
S-2234-238	3020-05C	21,000 gallons	$142.00
S-2234-239	3020-05C	21,000 gallons	$142.00
S-2234-245	3020-01G	1335 hp	$855.00
S-2234-246	3020-01A	25 hp	$92.00
S-2234-248	3020-05A	2000 gal	$79.00

Attachments

I: Current ATC and PTOs
II: Fugitive Emissions
III: Emissions Profiles
IV: BACT Guidelines
V: BACT Analysis
VI: Title V Compliance Certification Form
VII: HRA/AAQA
XIII: Draft ATCs

ATTACHMENT I
Current ATC and PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-216-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S)

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-217-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-219-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
INLET GAS TREATING WITH INLET GAS AMINE CONTACTOR, TREATED GAS COOLER, LEAN GLYCOL COOLER, TREATED GAS FILTER SEPARATOR

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-220-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
INLET GAS DEHYDRATION WITH MOLECULAR SIEVE DEHYDRATION, DRY GAS DUST FILTER, REGENERATION GAS HEATER, REGENERATION GAS COOLER AND SCRUBBER, AND REGENERATION GAS COOLER

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-221-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
NGL RECOVERY WITH EXPANDER/BOOSTER COMPRESSOR, GAS/GAS EXCHANGER, COLD SEPARATOR, DEMETHANIZER REBOILERS, DEMETHANIZER, AND DEETHANIZER FEED PUMPS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-222-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
RESIDUE GAS COMPRESSION WITH ELECTRIC MOTOR DRIVEN RESIDUE GAS COMPRESSOR(S), RESIDUE GAS COALESCER(S)

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-223-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
DEETHANIZER WITH REFLUX CONDENSER

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-224-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-225-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-226-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
REFRIGERATION SYSTEM WITH REFRIGERANT SUCTION SCRUBBER, REFRIGERANT COMPRESSOR(S) AND COMPRESSOR COMPONENTS, REFRIGERANT FLASH DRUM, REFRIGERANT CONDENSERS AND COMPONENTS, AND REFRIGERANT SURGE DRUM

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 1.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-227-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
AMINE SYSTEM WITH AMINE REGENERATION PACKAGE

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-228-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-229-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
PROPANE TANK (EXEMPT), BUTANE TANK (EXEMPT), AND 16,250 GALLON NATURAL GAS TANK

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gasoline (NGL) storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Natural gasoline (NGL) storage 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on the natural gasoline (NGL) storage 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Operator shall visually inspect natural gasoline (NGL) storage 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] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak from NGL storage tank, 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] Federally Enforceable Through Title V Permit
12. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. If a component type for the natural gasoline (NGL) storage 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-230-3 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 164 MMBTU/HR HOT OIL HEATER WITH JOHN ZINK C-RMB RAPID MIX ULTRA-LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Hot oil heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2 or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. 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] Federally Enforceable Through Title V Permit
12. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. 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 3% 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 Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-231-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
OVERHEAD GAS SYSTEM WITH FUEL GAS SCRUBBER, ETHANE/CO2 GLYCOL CONTACTOR, ETHANE/CO2 COMPRESSOR(S), ETHANE COOLERS AND ETHANE COOLER COMPONENTS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-232-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-233-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
2000 GALLON AMINE SUMP TANK

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Monthly average daily throughput shall not exceed 132 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True Vapor Pressure (TVP) of any organic liquid introduced to or stored in the sump shall not exceed 0.5 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. The permittee shall maintain monthly records of the tank throughput and TVP of the organic liquid introduced or stored in the sump. [District Rule 1070] Federally Enforceable Through Title V Permit
10. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-234-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** R23E

EQUIPMENT DESCRIPTION:
3000 GALLON GLYCOL SUMP TANK

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Monthly average daily throughput shall not exceed 197 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True Vapor Pressure (TVP) of any organic liquid introduced to or stored in the sump shall not exceed 0.5 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. The permittee shall maintain monthly records of the tank throughput and TVP of the organic liquid introduced or stored in the sump. [District Rule 1070] Federally Enforceable Through Title V Permit
10. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-235-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
250 MMSCF/DAY EMERGENCY USE SMOKELESS SONIC FLARE WITH FLARE HEADER AND FLARE KNOCK OUT DRUM (REVISED 12/15/10)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
3. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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 Rule 2201] Federally Enforceable Through Title V Permit
6. Flare shall be equipped with waste gas volume flow metering system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. A flame shall be present at all times when combustible gases are vented through this flare. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Flare shall be equipped with continuous pilot light or automatic re-ignition provisions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Gas line to flare shall be equipped with operational, volumetric flow rate indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur compound concentration of gas combusted shall not exceed 1.0 gr S/100 scf (16.9 ppmv H2S). [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Only natural gas with a sulfur content not exceeding 1.0 gr S/100scf shall be used as pilot fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. This flare shall be operated only during emergency situations. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Maximum amount of gas combusted shall not exceed 267,750 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall measure sulfur content of gas incinerated in flare within 60 days of startup and at least once every year thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
16. Permittee shall determine sulfur content of gas flared using ASTM method D3246 or double GC for H2S and mercaptans. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. Permittee shall keep accurate records of daily and annual quantity of gas combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
20. When combustible gases are vented to the flare, flare shall be equipped with a heat sensing device to detect the presence of a propane or natural gas pilot flame which is burning at all times. [District Rule 4311]
21. The permittee shall maintain monthly records of the number of hours of emergency operation. [District Rule 2201] Federally Enforceable Through Title V Permit
22. 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] Federally Enforceable Through Title V Permit
23. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-236-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Storage 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit

13. 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] Federally Enforceable Through Title V Permit

14. If a component type for storage 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

16. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-237-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Storage 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit
12. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. If a component type for storage 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-238-0 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Storage 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit
12. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. If a component type for storage 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. 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]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-239-1 **EXPIRATION DATE:** 10/31/2016

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
500 BBL SLOP OIL TANK CONNECTED TO EXISTING GAS GATHERING SYSTEM

PERMIT UNIT REQUIREMENTS

1. 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 Rule 2201] Federally Enforceable Through Title V Permit
2. Storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that routes all VOCs from the storage tank to a field gas gathering system. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. [District Rules 2201and 4623] Federally Enforceable Through Title V Permit
3. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv) for tank components and for components in piping from the tank to vapor control system truck line and 2,000 parts per million by volume (ppmv) for all other components including the tank vapor control system, separators, heater, and pumps. The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions from tank and from components in piping from tank to vapor control system trunk line shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions from tank vapor control system shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from tank components and from components in piping from the tank to vapor control system truck line calculated using (ALR) equations for a 10,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from the tank vapor control system calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
9. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of Rule 4409. [District Rule 4409] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

12. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

13. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

14. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 parts per million by volume (ppmv) for the tank and 2,000 parts per million by volume (ppmv) for the tank vapor control system 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

16. If a component type for storage 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] Federally Enforceable Through Title V Permit

17. 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] Federally Enforceable Through Title V Permit

18. 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] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-245-0 **EXPIRATION DATE:** 10/31/2016

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
AMINE TREATING SYSTEM WITH AMINE CONTACTOR; AMINE REGENERATION SYSTEM WITH RE-BOILER HEATED BY HOT OIL SYSTEM; WITH FLASH VESSEL AND AMINE REGENERATION OVERHEAD VAPORS ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-246-0 **EXPIRATION DATE:** 10/31/2016

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
ELECTRICALLY HEATED GLYCOL DEHYDRATION UNIT WITH VAPORS FROM FLASH VESSEL AND STILL VENT ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-2234-248-0 **EXPIRATION DATE:** 10/31/2016

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
2000 GALLON HORIZONTAL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM WITH VAPORS RETURNED TO A PROCESS STREAM OR TO A GAS GATHERING SYSTEM

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions for the tank calculated using (ALR) equations for a 10,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions for the tank vapor control system calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv) for the tank and 2,000 parts per million by volume (ppmv) for the tank vapor control system , as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions in piping from tank to vapor control system trunk line shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC fugitive emissions associated with tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Storage 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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 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] Federally Enforceable Through Title V Permit

11. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

12. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

13. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

14. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 parts per million by volume (ppmv) for the tank and 2,000 parts per million by volume (ppmv) for the tank vapor control system 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

16. If a component type for storage 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] Federally Enforceable Through Title V Permit

17. 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] Federally Enforceable Through Title V Permit

18. 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] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-218-0 **ISSUANCE DATE:** 12/02/2010

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
O2 REMOVAL SYSTEM WITH 19.5 MMBTU/HR O2 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT) , OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND O2 REMOVAL COOLER

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. 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 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

Arnaud Marjollet, Director of Permit Services
S-2234-218-0 Sep 24 2015 1:54PM -- EDGEHILR : Joint Inspection NOT Required

5. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
9. 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] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
12. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
13. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
14. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. O2 removal heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 6 ppmvd NOx @ 3% O2 or 0.007 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

24. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

25. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

29. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

30. 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 3% 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 Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

32. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit

33. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit

34. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit

35. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit

36. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

37. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit

38. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit

39. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit

40. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit

41. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071] Federally Enforceable Through Title V Permit

42. 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 1070, 4305, 4306, and 40 CFR 60.48c(i)] Federally Enforceable Through Title V Permit

43. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx, 299 lb/quarter; SOx, 115 lb/quarter; PM10, 325 lb/quarter; VOC, 259 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). Offsets for PM10 shall be provided at a SOx:PM10 interpollutant ratio of 1.0:1. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

44. ERC Certificate Numbers S-2824-2 (NOx), N-771-5 (SOx), N-771-5 (PM10), S-2822-1 (VOC), (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

ATTACHMENT II
Fugitive Emissions

S-2234-216

FACILITY NAME

S-2234-216 Inlet Gas System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	442	1	0.0019	7.333E+00	1.87	0.34
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	65	1	7.778E-03	7.281E+00	1.79	0.33
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	4,364	5	6.349E-04	1.370E+00	2.21	0.40
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	1,180	1	1.482E-03	3.228E+00	1.14	0.21
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**7.02**	
Proposed Total tons/yr VOC Emissions =		1.28
Current Total lb/day VOC Emissions =	**2.60**	
Current Total tons/yr VOC Emissions =		0.47
Change in Total lb/day VOC Emissions =	**4.42**	
Change in Total tons/yr VOC Emissions =		0.81
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		1.21

FACILITY NAME

S-2234-217 Mercury Removal System System with Inlet Gas Separator

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	36	1	1.852E-03	7.333E+00	1.70	0.31
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	15	0	7.778E-03	7.281E+00	0.03	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	62	0	6.349E-04	1.370E+00	0.01	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	28	0	1.482E-03	3.228E+00	0.01	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**1.75**	
Proposed Total tons/yr VOC Emissions =		0.32
Current Total lb/day VOC Emissions =	**0.20**	
Current Total tons/yr VOC Emissions =		0.04
Change in Total lb/day VOC Emissions =	**1.55**	
Change in Total tons/yr VOC Emissions =		0.28
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.42

FACILITY NAME

S-2234-218 O2 Removal System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	62	1	1.852E-03	7.333E+00	1.71	0.31
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	16	0	7.778E-03	7.281E+00	0.03	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	352	0	6.349E-04	1.370E+00	0.05	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	56	1	1.482E-03	3.228E+00	0.76	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.55**	
Proposed Total tons/yr VOC Emissions =		0.47
Current Total lb/day VOC Emissions =	**0.26**	
Current Total tons/yr VOC Emissions =		0.05
Change in Total lb/day VOC Emissions =	**2.30**	
Change in Total tons/yr VOC Emissions =		0.42
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.63

FACILITY NAME

S-2234-219 Inlet Gas Treater with Inlet Gas Amine Contactor, Treated Gas Cooler, Lean Glycol Cooler, Treated Gas Filter Separator

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	128	1	1.852E-03	7.333E+00	1.74	0.32
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	47	0	7.778E-03	7.281E+00	0.08	0.02
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	696	0	6.349E-04	1.370E+00	0.10	0.02
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	139	1	1.482E-03	3.228E+00	0.79	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.176E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.72**	
Proposed Total tons/yr VOC Emissions =		0.50
Current Total lb/day VOC Emissions =	**0.60**	
Current Total tons/yr VOC Emissions =		0.11
Change in Total lb/day VOC Emissions =	**2.12**	
Change in Total tons/yr VOC Emissions =		0.39
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.58

FACILITY NAME

S-2234-220 Inlet Gas Dehydration with Molecular Sieve Dehydration, Dry Gas Dust Filter, Regeneration Gas Heater, Regeneration Gas Cooler and Scrubber, and Regeneration Gas Cooler

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	111	1	1.852E-03	7.333E+00	1.73	0.32
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	28	0	7.778E-03	7.281E+00	0.05	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	439	0	6.349E-04	1.370E+00	0.06	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	134	1	1.482E-03	3.228E+00	0.79	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.64**
Proposed Total tons/yr VOC Emissions =	**0.48**
Current Total lb/day VOC Emissions =	**0.40**
Current Total tons/yr VOC Emissions =	**0.07**
Change in Total lb/day VOC Emissions =	**2.24**
Change in Total tons/yr VOC Emissions =	**0.41**
OFFSET at 1.5 Ratio	
Tons of VOC Emissions	**0.61**

FACILITY NAME

S-2234-221 NGL Recovery with Expander/Booster Compressor, Gas/Gas Exchanger, Cold Separator

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	22.0 %
Weight percentage of VOC in the total organic compounds in oil?	22.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	111	1	1.852E-03	7.333E+00	1.66	0.30
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	28	0	7.778E-03	7.281E+00	0.05	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	439	0	6.349E-04	1.370E+00	0.06	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	134	1	1.482E-03	3.228E+00	0.75	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.52**	
Proposed Total tons/yr VOC Emissions =		**0.46**
Current Total lb/day VOC Emissions =	**0.50**	
Current Total tons/yr VOC Emissions =		**0.09**
Change in Total lb/day VOC Emissions =	**2.02**	
Change in Total tons/yr VOC Emissions =		**0.37**
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		**0.55**

FACILITY NAME

S-2234-221 NGL Recovery with Expander/Booster Compressor, Gas/Gas Exchanger, Cold Separator,

Fugitive Emissions Using Screening Emission Factors

Updated Version

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	22.0 %
Weight percentage of VOC in the total organic compounds in oil?	22.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	198	1	1.852E-03	7.333E+00	1.69	0.31
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	4	0	1.402E-02	4.709E+00	0.01	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	51	0	7.778E-03	7.281E+00	0.09	0.02
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	226	1	6.349E-04	1.370E+00	0.33	0.06
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	223	1	1.482E-03	3.228E+00	0.78	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.90**	
Proposed Total tons/yr VOC Emissions =		**0.53**
Current Total lb/day VOC Emissions =	**0.50**	
Current Total tons/yr VOC Emissions =		**0.09**
Change in Total lb/day VOC Emissions =	**2.40**	
Change in Total tons/yr VOC Emissions =		**0.44**
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		**0.66**

FACILITY NAME

S-2234-222 Residue Gas Compression with Electric Motor Driven Residue Gas Compressor, Residue Gas

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	5.0 %
Weight percentage of VOC in the total organic compounds in oil?	5.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	62	0	1.852E-03	7.333E+00	0.01	0.00
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	22	0	7.778E-03	7.281E+00	0.01	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	121	1	6.349E-04	1.370E+00	0.07	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	24	1	1.482E-03	3.228E+00	0.16	0.03
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**0.25**	
Proposed Total tons/yr VOC Emissions =		0.05
Current Total lb/day VOC Emissions =	**0.20**	
Current Total tons/yr VOC Emissions =		0.04
Change in Total lb/day VOC Emissions =	**0.05**	
Change in Total tons/yr VOC Emissions =		0.01
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.01

FACILITY NAME

S-2234-223 Deethanizer with Reflux Condenser

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	74.0 %
Weight percentage of VOC in the total organic compounds in oil?	74.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	53	0	1.852E-03	7.333E+00	0.07	0.01
	Light Crude Oil	0	0	1.006E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	11	0	7.778E-03	7.281E+00	0.06	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	66	0	6.349E-04	1.370E+00	0.03	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	61	1	1.482E-03	3.228E+00	2.45	0.45
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.62**	
Proposed Total tons/yr VOC Emissions =		0.48
Current Total lb/day VOC Emissions =	**0.10**	
Current Total tons/yr VOC Emissions =		0.02
Change in Total lb/day VOC Emissions =	**2.52**	
Change in Total tons/yr VOC Emissions =		0.46
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.69

FACILITY NAME

S-2234-224 DePropanizer with Reflux Condenser and Reflux Drums

Fugitive Emissions Using Screening Emission Factors

revised / updated

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	135	1	1.852E-03	7.333E+00	7.58	1.38
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.21	0.04
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	28	0	7.778E-03	7.281E+00	0.22	0.04
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	1,164	0	6.349E-04	1.370E+00	0.74	0.13
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	177	1	1.482E-03	3.228E+00	3.49	0.64
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**12.24**	
Proposed Total tons/yr VOC Emissions =		2.23
Current Total lb/day VOC Emissions =	**0.70**	
Current Total tons/yr VOC Emissions =		0.13
Change in Total lb/day VOC Emissions =	**11.54**	
Change in Total tons/yr VOC Emissions =		2.11
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		3.16

FACILITY NAME

S-2234-224 DePropanizer with Reflux Condenser and Reflux Drums

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	98.8 %
Weight percentage of VOC in the total organic compounds in oil?	98.8 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	135	1	1.852E-03	7.333E+00	7.49	1.37
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.21	0.04
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	28	0	7.778E-03	7.281E+00	0.22	0.04
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	1,164	0	6.349E-04	1.370E+00	0.73	0.13
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	177	1	1.482E-03	3.228E+00	3.45	0.63
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**12.09**
Proposed Total tons/yr VOC Emissions =	**2.21**
Current Total lb/day VOC Emissions =	**0.70**
Current Total tons/yr VOC Emissions =	**0.13**
Change in Total lb/day VOC Emissions =	**11.39**
Change in Total tons/yr VOC Emissions =	**2.08**
OFFSET at 1.5 Ratio	
Tons of VOC Emissions	**3.12**

revised

FACILITY NAME

S-2234-225 DeButanizer with Reflux Condenser and Reflux Drums

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	124	1	1.852E-03	7.333E+00	7.56	1.38
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.21	0.04
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	27	0	7.778E-03	7.281E+00	0.21	0.04
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	660	0	6.349E-04	1.370E+00	0.42	0.08
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	148	1	1.482E-03	3.228E+00	3.45	0.63
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**11.86**	
Proposed Total tons/yr VOC Emissions =		2.16
Current Total lb/day VOC Emissions =	**0.50**	
Current Total tons/yr VOC Emissions =		0.09
Change in Total lb/day VOC Emissions =	**11.35**	
Change in Total tons/yr VOC Emissions =		2.07
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		3.11

FACILITY NAME

S-2234-226 Refrigeration System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	440	1	1.852E-03	7.333E+00	8.15	1.49
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	68	0	7.778E-03	7.281E+00	0.53	0.10
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	3,814	4	6.349E-04	1.370E+00	7.90	1.44
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	1,192	1	1.482E-03	3.228E+00	4.99	0.91
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**21.57**	
Proposed Total tons/yr VOC Emissions =		3.94
Current Total lb/day VOC Emissions =	**1.90**	
Current Total tons/yr VOC Emissions =		0.35
Change in Total lb/day VOC Emissions =	**19.67**	
Change in Total tons/yr VOC Emissions =		3.59
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		5.38

FACILITY NAME

S-2234-227 Amine System with Regeneration Package

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	21.0 %
Weight percentage of VOC in the total organic compounds in oil?	21.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	133	1	1.852E-03	7.333E+00	1.59	0.29
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	19	0	7.778E-03	7.281E+00	0.03	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	89	0	6.349E-04	1.370E+00	0.01	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	161	1	1.482E-03	3.228E+00	0.73	0.13
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.36**		
Proposed Total tons/yr VOC Emissions =			0.43
Current Total lb/day VOC Emissions =	**0.20**		
Current Total tons/yr VOC Emissions =			0.04
Change in Total lb/day VOC Emissions =	**2.16**		
Change in Total tons/yr VOC Emissions =			0.39
OFFSET at 1.5 Ratio			
Tons of VOC Emissions			0.59

FACILITY NAME

S-2234-228 Glycol System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	154	1	1.852E-03	7.333E+00	1.75	0.32
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	2	0	5.270E-02	4.709E+00	0.02	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	23	0	7.778E-03	7.281E+00	0.04	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	97	0	6.349E-04	1.370E+00	0.01	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	182	1	1.482E-03	3.228E+00	0.80	0.15
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.64**	
Proposed Total tons/yr VOC Emissions =		**0.48**
Current Total lb/day VOC Emissions =	**0.20**	
Current Total tons/yr VOC Emissions =		**0.04**
Change in Total lb/day VOC Emissions =	**2.44**	
Change in Total tons/yr VOC Emissions =		**0.44**
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		**0.67**

FACILITY NAME

S-2234-229 Propane Tank (Exempt), Butane Tank (Exempt), and 16,250 Gallon Natural Gas Tank

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	140	1	1.852E-03	7.333E+00	7.59	1.39
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	12	1	5.270E-02	4.709E+00	5.29	0.97
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	39	1	7.778E-03	7.281E+00	7.58	1.38
	Light Crude Oil	0	0	5.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	1,006	1	8.349E-04	1.370E+00	2.01	0.37
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	372	1	1.482E-03	3.228E+00	3.78	0.69
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**26.24**	
Proposed Total tons/yr VOC Emissions =		4.79
Current Total lb/day VOC Emissions =	0.90	
Current Total tons/yr VOC Emissions =		0.16
Change in Total lb/day VOC Emissions =	25.34	
Change in Total tons/yr VOC Emissions =		4.62
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		6.94

FACILITY NAME

S-2234-230 Hot Oil System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	159	1	1.852E-03	7.333E+00	7.63	1.39
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.21	0.04
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	30	0	7.778E-03	7.281E+00	0.23	0.04
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	244	0	6.349E-04	1.370E+00	0.15	0.03
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	134	1	1.482E-03	3.228E+00	3.42	0.62
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**11.65**	
Proposed Total tons/yr VOC Emissions =		**2.13**
Current Total lb/day VOC Emissions =	**0.20**	
Current Total tons/yr VOC Emissions =		**0.04**
Change in Total lb/day VOC Emissions =	**11.45**	
Change in Total tons/yr VOC Emissions =		**2.09**
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		**3.13**

FACILITY NAME

S-2234-231 Overhead Gas System with Fuel Gas Scrubber, Ethane /CO2 Glycol Contactor, Ethane/CO2 Compressor(s), Ethane Coolers, and Ethat Cooler Components

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	18.0 %
Weight percentage of VOC in the total organic compounds in oil?	18.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	159	1	1.852E-03	7.333E+00	1.37	0.25
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.04	0.01
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	30	0	7.778E-03	7.281E+00	0.04	0.01
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	146	0	6.349E-04	1.370E+00	0.02	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	134	1	1.482E-03	3.228E+00	0.62	0.11
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	8.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**2.09**	
Proposed Total tons/yr VOC Emissions =		0.38
Current Total lb/day VOC Emissions =	1.10	
Current Total tons/yr VOC Emissions =		0.20
Change in Total lb/day VOC Emissions =	0.99	
Change in Total tons/yr VOC Emissions =		0.18
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.27

FACILITY NAME

S-2234-232 Methanol Injection System with Permit Exempt (<250 Gallon) Methanol Tank

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	100.0 %
Weight percentage of VOC in the total organic compounds in oil?	100.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	7	1	1.852E-03	7.333E+00	7.34	1.34
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	2	0	5.270E-02	4.709E+00	0.11	0.02
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	1	0	7.778E-03	7.281E+00	0.01	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	16	0	6.349E-04	1.370E+00	0.01	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	4	0	1.482E-03	3.228E+00	0.01	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**7.47**		
		Proposed Total tons/yr VOC Emissions =	1.36
Current Total lb/day VOC Emissions =	**0.10**		
		Current Total tons/yr VOC Emissions =	0.02
Change in Total lb/day VOC Emissions =	**7.37**		
		Change in Total tons/yr VOC Emissions =	1.35
		OFFSET at 1.5 Ratio	
		Tons of VOC Emissions	2.02

FACILITY NAME

S-2234-233 2000 Gallon Amine Sump Tank

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	21.0 %
Weight percentage of VOC in the total organic compounds in oil?	21.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	7	1	1.005E-03	3.741E+00	0.79	0.14
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	2	0	1.402E-02	4.709E+00	0.01	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	0	0	7.778E-03	7.281E+00	0.00	0.00
	Light Crude Oil	1	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	0	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	16	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	0	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	4	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**0.80**	
Proposed Total tons/yr VOC Emissions =		0.15
Current Total lb/day VOC Emissions =	0.20	
Current Total tons/yr VOC Emissions =		0.04
Change in Total lb/day VOC Emissions =	0.60	
Change in Total tons/yr VOC Emissions =		0.11
OFFSET at 1.5 Distance		
Tons of VOC Emissions		0.16

FACILITY NAME

S-2234-234 Glycol Sump Tank

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	17	1	1.005E-03	3.741E+00	0.86	0.16
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	6	0	1.402E-02	4.709E+00	0.02	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	10	0	7.778E-03	7.281E+00	0.02	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	0	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	18	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	37	0	1.482E-03	3.228E+00	0.01	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	0.92		
Proposed Total tons/yr VOC Emissions =			0.17
Current Total lb/day VOC Emissions =	0.40		
Current Total tons/yr VOC Emissions =			0.07
Change in Total lb/day VOC Emissions =	0.52		
Change in Total tons/yr VOC Emissions =			0.09
OFFSET at 1.5 Ratio			
Tons of VOC Emissions			0.14

FACILITY NAME

S-2234-235 250 MMSCF/DAY Flare System

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	16.0 %
Weight percentage of VOC in the total organic compounds in oil?	16.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	49	1	1.852E-03	7.333E+00	1.19	0.22
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	4	0	5.270E-02	4.709E+00	0.03	0.01
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	16	0	7.778E-03	7.281E+00	0.02	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	76	0	6.349E-04	1.370E+00	0.01	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	35	0	1.482E-03	3.228E+00	0.01	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**1.26**	
Proposed Total tons/yr VOC Emissions =		**0.23**
Current Total lb/day VOC Emissions =	**0.20**	
Current Total tons/yr VOC Emissions =		**0.04**
Change in Total lb/day VOC Emissions =	**1.06**	
Change in Total tons/yr VOC Emissions =		**0.19**
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		**0.29**

FACILITY NAME

S-2234-236 Amine Storage Tank Served by Vapor Recovery

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	37.0 %
Weight percentage of VOC in the total organic compounds in oil?	37.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	8	1	1.005E-03	3.741E+00	1.39	0.25
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	2	0	1.402E-02	4.709E+00	0.01	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	2	0	7.778E-03	7.281E+00	0.01	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	0	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	8	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	14	0	1.482E-03	3.228E+00	0.01	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	1.41	Proposed Total tons/yr VOC Emissions =	0.26
Current Total lb/day VOC Emissions =	0.00	Current Total tons/yr VOC Emissions =	0.00
Change in Total lb/day VOC Emissions =	1.41	Change in Total tons/yr VOC Emissions =	0.26
OFFSET at 1.5 Ratio		Tons of VOC Emissions	0.39

FACILITY NAME

S-2234-237 Water Storage Tank served by Vapor Recovery

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	4	1	1.852E-03	7.333E+00	1.69	0.31
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	1	0	7.778E-03	7.281E+00	0.00	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	4	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	6	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**1.69**	
Proposed Total tons/yr VOC Emissions =		0.31
Current Total lb/day VOC Emissions =	**0.00**	
Current Total tons/yr VOC Emissions =		0.00
Change in Total lb/day VOC Emissions =	**1.69**	
Change in Total tons/yr VOC Emissions =		0.31
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.46

FACILITY NAME

S-2234-238 Produced Water Storage Tank served by Vapor Recovery

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	4	1	1.852E-03	7.333E+00	1.69	0.31
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	1	0	7.778E-03	7.281E+00	0.00	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	4	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	6	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	1.69		
		Proposed Total tons/yr VOC Emissions =	0.31
Current Total lb/day VOC Emissions =	0.00		
		Current Total tons/yr VOC Emissions =	0.00
Change in Total lb/day VOC Emissions =	1.69		
		Change in Total tons/yr VOC Emissions =	0.31
		OFFSET at 1.5 Ratio	
		Tons of VOC Emissions	0.46

FACILITY NAME

S-2234-239 SLOP OIL TANK Connected to Exisiting Gathering System (Tank Components)

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	18	1	1.005E-03	3.741E+00	0.86	0.16
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	7	0	7.778E-03	7.281E+00	0.01	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	0	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	4	1	5.291E-04	1.238E+00	0.29	0.05
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	4	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	36	0	1.270E-03	1.376E+01	0.01	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.037E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**1.17**
Proposed Total tons/yr VOC Emissions =	0.21
Current Total lb/day VOC Emissions =	**0.10**
Current Total tons/yr VOC Emissions =	0.02
Change in Total lb/day VOC Emissions =	**1.07**
Change in Total tons/yr VOC Emissions =	0.20
OFFSET at 1.5 Distance	
Tons of VOC Emissions	0.29

FACILITY NAME

S-2234-239 SLOP OIL TANK Connected to Exisiting Gathering System (Gathering System Components)

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	3	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	0	0	7.778E-03	7.281E+00	0.00	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	13	1	6.349E-04	1.370E+00	0.32	0.06
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	4	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**0.32**
Proposed Total tons/yr VOC Emissions =	**0.06**
Current Total lb/day VOC Emissions =	**0.10**
Current Total tons/yr VOC Emissions =	**0.02**
Change in Total lb/day VOC Emissions =	**0.22**
Change in Total tons/yr VOC Emissions =	**0.04**
OFFSET at 1.5 Distance	
Tons of VOC Emissions	**0.06**

FACILITY NAME

S-2234-245 Amine System

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	0.13 %
Weight percentage of VOC in the total organic compot	23.0 %
Weight percentage of VOC in the total organic compot	23.0 %

Equipment Type	Service	Componen Count	Total leaking components	Screening Value EF < 10,000 ppmv (lb/day/source)	TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	703	1	1.852E-03	7.333E+00	1.98	0.36
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
ump Seals	Gas/Light Liquid	45	0	5.270E-02	4.709E+00	0.54	0.10
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	2,243	2	7.778E-03	7.281E+00	7.33	1.34
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	2,472	3	6.349E-04	1.370E+00	1.30	0.24
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	599	1	1.482E-03	3.228E+00	0.94	0.17
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
pen-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**12.09**	
Proposed Total tons/yr VOC Emissions =		2.21
Current Total lb/day VOC Emissions =	**1.00**	
Current Total tons/yr VOC Emissions =		0.18
Change in Total lb/day VOC Emissions =	**11.09**	
Change in Total tons/yr VOC Emissions =		2.02
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		3.04

FACILITY NAME

S-2234-246 Electrically Heated Glycol Dehydration Unit with Vapors from Flash Vessel and Still Vent Routed to Process System Including Other Miscellaneous Equipment Such as Filters, Heat Exchangers, Pump, and Vessels

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	824	1	1.852E-03	7.333E+00	2.04	0.37
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	10	0	5.270E-02	4.709E+00	0.12	0.02
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	173	1	7.778E-03	7.281E+00	1.98	0.36
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	3,052	3	6.349E-04	1.370E+00	1.39	0.25
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	772	1	1.482E-03	3.228E+00	1.01	0.18
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	6.54
Proposed Total tons/yr VOC Emissions =	1.19
Current Total lb/day VOC Emissions =	0.60
Current Total tons/yr VOC Emissions =	0.11
Change in Total lb/day VOC Emissions =	5.94
Change in Total tons/yr VOC Emissions =	1.08
OFFSET at 1.5 Ratio	
Tons of VOC Emissions	1.63

FACILITY NAME

S-2234-248 2000 Gallon Horizontal Drain Tank Served by Vapor Recovery System with Vapors Returned to a Process Stream or to a Gas Gathering System (Tank Components)

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	10	1	1.005E-03	3.741E+00	0.86	0.16
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	3	0	7.778E-03	7.281E+00	0.01	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	0	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	14	1	5.291E-04	1.238E+00	0.29	0.05
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	9	0	1.482E-03	3.228E+00	0.00	0.00
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	1.16	
Proposed Total tons/yr VOC Emissions =		0.21
Current Total lb/day VOC Emissions =	0.20	
Current Total tons/yr VOC Emissions =		0.04
Change in Total lb/day VOC Emissions =	0.96	
Change in Total tons/yr VOC Emissions =		0.17
OFFSET at 1.5 Ratio		
Tons of VOC Emissions		0.26

FACILITY NAME

S-2234-248 2000 Gallon Horizontal Drain Tank Served by Vapor Recovery System with Vapors Returned to a Process Stream or to a Gas Gathering System (Gathering system components)

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 ?	0.13 %
Weight percentage of VOC in the total organic compounds in gas?	23.0 %
Weight percentage of VOC in the total organic compounds in oil?	23.0 %

Equipment Type	Service	Component Count	Total leaking components	Screening Value EF - TOC < 10,000 ppmv (lb/day/source)	Screening Value EF - TOC ≥ 10,000 ppmv (lb/day/source)	VOC emissions (lb/day)	VOC emissions (tons/yr)
Valves	Gas/Light Liquid	3	0	1.852E-03	7.333E+00	0.00	0.00
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A	
Others	Gas/Light Liquid	0	0	7.778E-03	7.281E+00	0.00	0.00
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00	0.00
Connectors	Gas/Light Liquid	13	0	6.349E-04	1.370E+00	0.00	0.00
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00	0.00
Flanges	Gas/Light Liquid	13	1	1.482E-03	3.228E+00	0.75	0.14
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00	0.00

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

Proposed Total lb/day VOC Emissions =	**0.75**
Proposed Total tons/yr VOC Emissions =	0.14
Current Total lb/day VOC Emissions =	**0.10**
Current Total tons/yr VOC Emissions =	0.02
Change in Total lb/day VOC Emissions =	**0.65**
Change in Total tons/yr VOC Emissions =	0.12
OFFSET at 1.5 Ratio	
Tons of VOC Emissions	0.18

Existing ERC Values						Group	Updated ERC Values					
ERC	1st	2nd	3rd	4th	tpy		ERC	1st	2nd	3rd	4th	tpy
S-3327-1	24	24	24	24	0.05	1	S-3327-1	24	24	24	24	0.05
S-2627-1	52	52	52	53	0.10		S-2627-1	52	52	52	53	0.10
S-0829-1	57	60	72	58	0.12		S-0829-1	57	60	72	58	0.12
S-2625-1	22	110	96	68	0.15		S-2625-1	22	110	96	68	0.15
S-3078-1	81	82	83	83	0.16		S-3078-1	81	82	83	83	0.16
S-3077-1	121	123	124	124	0.25		S-3077-1	121	123	124	124	0.25
S-3053-1	137	139	140	140	0.28		S-3053-1	137	139	140	140	0.28
S-1783-1	587	2	35	4	0.31	2	S-1783-1	587	2	35	4	0.31
S-1773-1	379	0	0	468	0.42	3	S-1773-1	379	0	0	468	0.42
S-1777-1	419	454	0	0	0.44		S-1777-1	419	454	0	0	0.44
S-1778-1	0	1,021	0	0	0.51	4	S-1778-1	0	255	510	256	0.51
S-1779-1	0	656	559	0	0.61	5	S-1779-1	0	304	304	607	0.61
S-1754-1	0	653	619	0	0.64	6	S-1754-1	0	518	377	377	0.64
S-1782-1	454	464	398	0	0.66	7	S-1782-1	454	330	532	0	0.66
S-4228-1	443	456	316	463	0.84		S-4228-1	443	322	450	463	0.84
S-1780-1	0	1,678	0	0	0.84	8	S-1780-1	230	530	529	389	0.84
S-1775-1	604	591	0	577	0.89	9	S-1775-1	604	295	296	577	0.89
S-2623-1	0	895	988	68	0.98	10	S-2623-1	489	490	490	482	0.98
S-2120-1	55	794	1,411	55	1.16	11	S-2120-1	577	580	580	578	1.16
S-2301-1	55	1,046	1,416	172	1.34	12	S-2301-1	675	670	670	674	1.34
S-4140-1	19	2,065	2,847	12	2.47	13	S-4140-1	1,235	1,236	1,236	1,236	2.47
S-3536-1	44	2,319	3,256	356	2.99	14	S-3536-1	1,495	1,494	1,493	1,493	2.99
S-3538-1	0	2,333	3,325	626	3.14	15	S-3538-1	1,571	1,571	1,571	1,571	3.14
S-3166-1	842	2,545	2,372	659	3.21	16	S-3166-1	1,605	1,605	1,604	1,604	3.21
S-3169-1	193	2,665	3,573	520	3.48	17	S-3169-1	1,737	1,738	1,738	1,738	3.48
S-2490-1	0	2,806	3,570	1,534	3.96	18	S-2490-1	1,978	1,977	1,977	1,978	3.96
S-1706-1	2,314	5,505	6,449	2,760	8.51	19	S-1706-1	2,314	5,505	4,649	4,560	8.51
S-3379-1	386	6,020	8,655	1,509	8.29	20	S-3379-1	5,886	2,895	4,030	3,759	8.29
Total	7,288	35,558	40,380	10,333	46.78		Reallocation	23,172	23,361	23,662	23,364	46.78
Demand	19,561	19,551	19,561	19,561	39.12		Demand	19,561	19,561	19,561	19,561	39.12
Remainder	-12,273	16,007	20,819	-9,228	N/A		Remainder	3,611	3,800	4,101	3,803	7.66

Notes: 2nd and 3rd quarter values redistrit

4.13.8 AER for NOx and VOC that occurred from April through November may be used to offset increases in NOx and VOC during any period of the year.

ATTACHMENT III
Emissions Profiles

Application Emissions

Permit #: S-2234-216-1	**Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	2560.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	7.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	399.0
Q2:	0.0	0.0	0.0	0.0	399.0
Q3:	0.0	0.0	0.0	0.0	399.0
Q4:	0.0	0.0	0.0	0.0	400.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					599.0
Q2:					599.0
Q3:					599.0
Q4:					599.0

Application Emissions

Permit #: S-2234-217-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	640.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	141.0
Q2:	0.0	0.0	0.0	0.0	141.0
Q3:	0.0	0.0	0.0	0.0	414.0
Q4:	0.0	0.0	0.0	0.0	142.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					212.0
Q2:					212.0
Q3:					212.0
Q4:					212.0

Application Emissions

Permit #: S-2234-218-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1196.0	460.0	1298.0	6320.0	1868.0
Daily Emis. Limit (lb/Day)	3.0	1.3	3.6	17.3	5.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	208.0
Q2:	0.0	0.0	0.0	0.0	209.0
Q3:	0.0	0.0	0.0	0.0	209.0
Q4:	0.0	0.0	0.0	0.0	209.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					313.0
Q2:					313.0
Q3:					313.0
Q4:					314.0

Application Emissions

Permit #: S-2234-219-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/12/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1000.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	198.0
Q2:	0.0	0.0	0.0	0.0	198.0
Q3:	0.0	0.0	0.0	0.0	198.0
Q4:	0.0	0.0	0.0	0.0	198.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					297.0
Q2:					297.0
Q3:					297.0
Q4:					297.0

Application Emissions

Permit #: S-2234-220-1
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC

Last Updated
10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	960.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	207.0
Q2:	0.0	0.0	0.0	0.0	207.0
Q3:	0.0	0.0	0.0	0.0	207.0
Q4:	0.0	0.0	0.0	0.0	208.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					311.0
Q2:					311.0
Q3:					311.0
Q4:					311.0

Application Emissions

Permit #: S-2234-221-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1060.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	222.0
Q2:	0.0	0.0	0.0	0.0	223.0
Q3:	0.0	0.0	0.0	0.0	223.0
Q4:	0.0	0.0	0.0	0.0	223.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					334.0
Q2:					334.0
Q3:					334.0
Q4:					335.0

Application Emissions

Permit #: S-2234-222-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	100.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	8.0
Q2:	0.0	0.0	0.0	0.0	9.0
Q3:	0.0	0.0	0.0	0.0	9.0
Q4:	0.0	0.0	0.0	0.0	9.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-2234-223-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	960.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	231.0
Q2:	0.0	0.0	0.0	0.0	231.0
Q3:	0.0	0.0	0.0	0.0	231.0
Q4:	0.0	0.0	0.0	0.0	232.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					347.0
Q2:					347.0
Q3:					347.0
Q4:					347.0

Application Emissions

Permit #: S-2234-224-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4460.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	12.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1049.0
Q2:	0.0	0.0	0.0	0.0	1049.0
Q3:	0.0	0.0	0.0	0.0	1049.0
Q4:	0.0	0.0	0.0	0.0	1049.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					1573.0
Q2:					1573.0
Q3:					1574.0
Q4:					1574.0

Application Emissions

Permit #: S-2234-225-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4324.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	11.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1033.0
Q2:	0.0	0.0	0.0	0.0	1033.0
Q3:	0.0	0.0	0.0	0.0	1034.0
Q4:	0.0	0.0	0.0	0.0	1034.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					1548.0
Q2:					1549.0
Q3:					1549.0
Q4:					1549.0

Application Emissions

Permit #: S-2234-226-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	7880.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	21.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1798.0
Q2:	0.0	0.0	0.0	0.0	1799.0
Q3:	0.0	0.0	0.0	0.0	1799.0
Q4:	0.0	0.0	0.0	0.0	1799.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					2698.0
Q2:					2698.0
Q3:					2698.0
Q4:					2699.0

Application Emissions

Permit #: S-2234-227-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	860.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	196.0
Q2:	0.0	0.0	0.0	0.0	197.0
Q3:	0.0	0.0	0.0	0.0	197.0
Q4:	0.0	0.0	0.0	0.0	197.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					294.0
Q2:					294.0
Q3:					295.0
Q4:					295.0

Application Emissions

Permit #: S-2234-228-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	960.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	218.0
Q2:	0.0	0.0	0.0	0.0	218.0
Q3:	0.0	0.0	0.0	0.0	219.0
Q4:	0.0	0.0	0.0	0.0	219.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					327.0
Q2:					328.0
Q3:					328.0
Q4:					328.0

Application Emissions

Permit #: S-2234-229-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	9580.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	26.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	2309.0
Q2:	0.0	0.0	0.0	0.0	2310.0
Q3:	0.0	0.0	0.0	0.0	2310.0
Q4:	0.0	0.0	0.0	0.0	2310.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					3498.0
Q2:					3498.0
Q3:					3499.0
Q4:					3499.0

Permit #: S-2234-230-4 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	11226.0	4871.0	13761.0	66996.0	14219.0
Daily Emis. Limit (lb/Day)	30.8	13.3	37.7	183.5	39.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1047.0
Q2:	0.0	0.0	0.0	0.0	1048.0
Q3:	0.0	0.0	0.0	0.0	1048.0
Q4:	0.0	0.0	0.0	0.0	1048.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					1571.0
Q2:					1572.0
Q3:					1572.0
Q4:					1572.0

Application Emissions

Permit #: S-2234-231-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	760.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	86.0
Q2:	0.0	0.0	0.0	0.0	86.0
Q3:	0.0	0.0	0.0	0.0	86.0
Q4:	0.0	0.0	0.0	0.0	87.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					129.0
Q2:					129.0
Q3:					130.0
Q4:					130.0

Application Emissions

Permit #: S-2234-232-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	2720.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	7.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	673.0
Q2:	0.0	0.0	0.0	0.0	673.0
Q3:	0.0	0.0	0.0	0.0	674.0
Q4:	0.0	0.0	0.0	0.0	674.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					1010.0
Q2:					1010.0
Q3:					1010.0
Q4:					1011.0

Application Emissions

Permit #: S-2234-233-2 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	300.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	71.0
Q2:	0.0	0.0	0.0	0.0	71.0
Q3:	0.0	0.0	0.0	0.0	72.0
Q4:	0.0	0.0	0.0	0.0	72.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					107.0
Q2:					107.0
Q3:					107.0
Q4:					108.0

Application Emissions

Permit #: S-2234-234-2 Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	340.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	47.0
Q2:	0.0	0.0	0.0	0.0	47.0
Q3:	0.0	0.0	0.0	0.0	47.0
Q4:	0.0	0.0	0.0	0.0	47.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					70.0
Q2:					70.0
Q3:					71.0
Q4:					71.0

Application Emissions

Permit #: S-2234-235-2 Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	0.0
Daily Emis. Limit (lb/Day)	18054.0	714.2	2124.0	98235.0	16726.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	100.0
Q2:	0.0	0.0	0.0	0.0	100.0
Q3:	0.0	0.0	0.0	0.0	100.0
Q4:	0.0	0.0	0.0	0.0	101.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					150.0
Q2:					150.0
Q3:					151.0
Q4:					151.0

Application Emissions

Permit #: S-2234-236-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	520.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	126.0
Q2:	0.0	0.0	0.0	0.0	127.0
Q3:	0.0	0.0	0.0	0.0	127.0
Q4:	0.0	0.0	0.0	0.0	127.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					190.0
Q2:					190.0
Q3:					190.0
Q4:					191.0

Application Emissions

Permit #: S-2234-237-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	620.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	154.0
Q2:	0.0	0.0	0.0	0.0	154.0
Q3:	0.0		0.0	0.0	154.0
Q4:	0.0	0.0	0.0	0.0	155.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					231.0
Q2:					231.0
Q3:					232.0
Q4:					232.0

Application Emissions

Permit #: S-2234-238-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	620.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	154.0
Q2:	0.0	0.0	0.0	0.0	154.0
Q3:	0.0	0.0	0.0	0.0	154.0
Q4:	0.0	0.0	0.0	0.0	154.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					231.0
Q2:					231.0
Q3:					231.0
Q4:					231.0

Application Emissions

Permit #: S-2234-239-2	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	537.0
Daily Emis. Limit (lb/Day)	0.0	0.0		0.0	1.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	125.0
Q2:	0.0	0.0	0.0	0.0	125.0
Q3:	0.0	0.0	0.0	0.0	125.0
Q4:	0.0	0.0	0.0	0.0	125.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					187.0
Q2:					187.0
Q3:					188.0
Q4:					188.0

Permit #: S-2234-245-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4420.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	12.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1011.0
Q2:	0.0	0.0	0.0	0.0	1011.0
Q3:	0.0	0.0	0.0	0.0	1012.0
Q4:	0.0	0.0	0.0	0.0	1012.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					1517.0
Q2:					1517.0
Q3:					1517.0
Q4:					1518.0

Application Emissions

Permit #: S-2234-246-1 **Last Updated**
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC 10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	2380.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	6.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	537.0
Q2:	0.0	0.0	0.0	0.0	537.0
Q3:	0.0	0.0	0.0	0.0	537.0
Q4:	0.0	0.0	0.0	0.0	538.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					806.0
Q2:					806.0
Q3:					806.0
Q4:					806.0

Application Emissions

Permit #: S-2234-248-1	Last Updated
Facility: CALIFORNIA RESOURCES ELK HILLS, LLC	10/13/2015 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	694.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	2.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	148.0
Q2:	0.0	0.0	0.0	0.0	148.0
Q3:	0.0	0.0	0.0	0.0	148.0
Q4:	0.0	0.0	0.0	0.0	148.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					222.0
Q2:					222.0
Q3:					222.0
Q4:					222.0

ATTACHMENT IV
BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.4.2*

Last Update: 12/31/1998

Waste Gas Flare - Incinerating Produced Gas

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
SOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.	Precombustion SOx scrubbing system (non-emergency flares only.)	
PM10	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.		
NOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
CO	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1*

Last Update: 9/10/2013

Emergency Diesel IC engine

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Latest EPA Tier Certification level for applicable horsepower range*		
SOX	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
PM10	0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)		
NOX	Latest EPA Tier Certification level for applicable horsepower range*		
CO	Latest EPA Tier Certification level for applicable horsepower range*		

*Note: for emergency engines 50 <= bhp < 75, Tier 4 Interim certification is the requirement; for emergency engines 75 <= bhp < 750, Tier 3 certification is the requirement; for emergency engines => 750 bhp, Tier 2 certification is the requirement.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state Implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.2.7*

Last Update 11/27/2006

Natural Gas Processing Plant - Valves, Connectors, and Compressor and Pump Seals (Subject to Rule 4403) < or = 100 Million SCF/Day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 10,000 ppmv above background when measured per EPA Method 21, for all components, and an Inspection and Maintenance Program pursuant to District Rule 4409.	1. Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of • 100 ppmv above background (for Valves and Connectors) and • 500 ppmv (for Compressor and Pump Seals) when measured per EPA Method 21 from the potential source, and an Inspection and Maintenance Program pursuant to District Rule 4409. 2. Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 5,000 ppmv above background when measured EPA Method 21, for all components, and an Inspection and Maintenance Program pursuant to District Rule 4409.	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity **

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.11 (10/01/02).

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

ATTACHMENT V
BACT Analysis

Fugitive Emissions

BACT Guideline 7.2.1 for Natural Gas Processing Plant - Valves, Connectors, and Compressor and pump Seals (Subject to Rule 4409) ≤ 100 MMscf/day

Top-Down Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technologies

Achieved in Practice

Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 10,000 ppmv above background when measured as per EPA Method 21, for all components, and an Inspection and Maintenance Program pursuant to District Rule 4451.

Technologically Feasible

1)Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane , in excess of 100 ppmv above background (for valves and connectors) and ; 500 ppmv (for Compressors and Pump Seals) when measured as per EPA Method 21 from the potential source, and an Inspection and Maintenance Program pursuant to District Rule 4409.

2) Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 5000 ppmv above background when measured as per EPA Method 21, for all components and an Inspection and Maintenance Program pursuant to District Rule 4409.

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1)Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane , in excess of 100 ppmv above background (for valves and connectors) and ; 500 ppmv (for Compressors and Pump Seals) when measured as per EPA Method 21 from the potential source, and an Inspection and Maintenance Program pursuant to District Rule 4409.

2) Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 5000 ppmv above background when measured as per EPA Method 21, for all components and an Inspection and Maintenance Program pursuant to District Rule 4409.

3) Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane, in excess of 10,000 ppmv above background when measured as per EPA Method 21, for all components, and an Inspection and Maintenance Program pursuant to District Rule 4451.

Step 4 - Cost Effectiveness Analysis

Since the applicant has chosen the most effective control technology listed in step 3 as a technologically feasible option; a cost effectiveness analysis is not required.

Step 5 - Select BACT

Leak defined as a dripping rate of more than three (3) drops per minute of liquid containing VOC or as a reading of methane , in excess of 100 ppmv above background (for valves and connectors) and; 500 ppmv (for Compressors and Pump Seals) when measured as per EPA Method 21 from the potential source, and an Inspection and Maintenance Program pursuant to District Rule 4409.

ATTACHMENT VI
Title V Compliance Certification Form

San Joaquin Valley
Unified Air Pollution Control District

HEALTHY AIR LIVING

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: California Resources Elk Hills, LLC	FACILITY ID: S – 2234
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: California Resources Corporation	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

(GP) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(GP) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(GP) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(GP) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Signature of Responsible Official

08/19/15
Date

George Gough
Name of Responsible Official (please print)

Manager, HSE
Title of Responsible Official (please print)

- Visual Studio 2010 (Open source projects) – Potentially free?
  - https://www.microsoft.com/en-us/download/details.aspx?id=23507
  - VS 2015 Community (Free) - https://www.visualstudio.com/en-us/downloads/download-visual-studio-vs

- Crystal Reports Runtimes and Service Pack for Visual Studio 2010 (Required for certain projects, ex: 4901) – Price?

- DevExpress Components (Required for certain projects, ex: 4901) – Price?

- Dynamic PDF Components (Required for certain projects, ex: 4901) – Price?

- Source Gear Vault (Source Control System) – Price?

ATTACHMENT VII
HRA/AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Richard Edgehill – Permit Services
From:	Yu Vu – Technical Services
Date:	October 19, 2015
Facility Name:	California Resources Elk Hills
Location:	Section 14 T30S R22E and Section 35 T30S R23E
Application #(s):	S-2234-16-1 thru 229-1, 230-4, 231-1, 232-1, 233-2, 234-2, 235-2, 236-1, 237-1, 238-1, 239-2, 245-1, 246-1, and 248-1
Project #:	S-1153552

A. RMR SUMMARY

RMR Summary							
Categories	**NG Tank (Unit 229-1)**	**Amine Sump (Unit 233-2)**	**Glycol Sump (Unit 234-2)**	**Amine Tank (Unit 236-1)**	**Fresh Water Tank (Unit 237-1)**	**Project Totals**	**Facility Totals**
Prioritization Score	2.26	0.07	0.04	0.12	0.15	>1.0	>1.0
Acute Hazard Index	0.03	0.00	0.00	0.00	0.00	0.52	0.75
Chronic Hazard Index	0.00	0.00	0.00	0.00	0.00	0.01	0.04
Maximum Individual Cancer Risk (10^{-6})	0.04	0.00	0.00	0.00	0.00	0.32	3.79
T-BACT Required?	**No**	**No**	**No**	**No**	**No**		
Special Permit Conditions?	**No**	**No**	**No**	**No**	**No**		

RMR Summary							
Categories	**Produced Water Tank (Unit 238-1)**	**Slop Oil Tank (Unit 239-2)**	**Fugitives Sec 35[1] (Unit 216-1)**	**Fugitives Sec 14[2] (Unit 245-1)**		**Project Totals**	**Facility Totals**
Prioritization Score	0.15	0.12	8.13	1.66		>1.0	>1.0
Acute Hazard Index	0.00	0.00	0.47	0.00		0.52	0.75
Chronic Hazard Index	0.00	0.00	0.01	0.00		0.01	0.04
Maximum Individual Cancer Risk (10^{-6})	0.00	0.00	0.26	0.00		0.32	3.79
T-BACT Required?	**No**	**No**	**No**	**No**			
Special Permit Conditions?	**No**	**No**	**No**	**No**			

[1] Includes fugitive emissions from units 216-1 thru 228-1, 230-4, 231-1, 232-1, and 235-2. These units were aggregated because they were similar source types and were all located in the same ¼ section (NW) of Section 35 T30S R23E.

[2] Includes fugitive emissions from units 245-1, 246-1, and 248-1. These units were aggregated because they were similar source types and were all located in the same ¼ section (SE) of Section 14 T30S R22E.

Proposed Permit Conditions

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

Unit # S-2234-16-1 thru 229-1, 230-4, 231-1, 232-1, 233-2, 234-2, 235-2, 236-1, 237-1, 238-1, 239-2, 245-1, 246-1, and 248-1

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on August 25, 2015, to perform a Risk Management Review for proposed modifications to miscellaneous units at the California Resources Elk Hills Gas Plant. The modifications consist of only increases in fugitive VOC emissions for 27 different permitted units. An ambient air quality analysis (AAQA) was also required for this project, however, since there are only VOC emissions in this project and there is currently no standard by which to compare against, an AAQA was not performed.

II. Analysis

Technical Services performed a health risk assessment using VOC emissions provided by the project engineer and District-approved emission factors for fugitive oilfield emissions. The cumulative prioritization scores were greater than 1.0, thus modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2004-2008 from Missouri Triangle to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

*Note: This project only involved fugitive VOC emissions. It is assumed that units which had their original emissions evaluated using a maximum throughput or fuel consumption were already evaluated using their maximum toxic emissions. The emissions in this project would be in addition to those previously modeled emissions and would come from fugitive sources, such as valves, flanges, connectors, etc. Units that had clearly defined locations (e.g. tanks) and stack parameters were modeled at their actual locations. As a conservative assumption, emissions from all other sources were aggregated and modeled as a single 25 meter by 25 meter area source, located where the emissions are expected to be concentrated.

Analysis Parameters Unit 216-1 (FUGS35)			
Source Type	Area	**Location Type**	Rural
X-Length (m)	25	**Closest Receptor (m)**	~330
Y-Length (m)	25	**Type of Receptor**	Worker
Release Height (m)	0	**Pollutant Type**	VOC
		Emission Rate	3.77 lb/hr

Includes fugitive emissions from units 216-1 thru 228-1, 230-4, 231-1, 232-1, and 235-2. These units were aggregated because they were similar source types and were all located in the same ¼ section (NW) of Section 35 T30S R23E.

Analysis Parameters Unit 245-1 (FUGS14)			
Source Type	Area	**Location Type**	Rural
X-Length (m)	25	**Closest Receptor (m)**	~180
Y-Length (m)	25	**Type of Receptor**	Worker
Release Height (m)	0	**Pollutant Type**	VOC
		Emission Rate	0.78 lb/hr

Includes fugitive emissions from units 245-1, 246-1, and 248-1. These units were aggregated because they were similar source types and were all located in the same ¼ section (SE) of Section 14 T30S R22E.

Analysis Parameters Unit 229-1 (NG Tank)			
Source Type	Circular Area	**Location Type**	Rural
Radius (m)	8.992	**Closest Receptor (m)**	~250
		Type of Receptor	Worker
Release Height (m)	11.887	**Pollutant Type**	VOC
		Emission Rate	1.05 lb/hr

Analysis Parameters Unit 233-2 (Amine Sump)			
Source Type	Circular Area	**Location Type**	Rural
X-Length (m)	1.28	**Closest Receptor (m)**	~190
Y-Length (m)	1.28	**Type of Receptor**	Worker
Release Height (m)	0	**Pollutant Type**	VOC
		Emission Rate	0.033 lb/hr

Parameters pulled from project S-1103628

Analysis Parameters Unit 234-2 (Glycol Sump)			
Source Type	Circular Area	**Location Type**	Rural
X-Length (m)	1.56	**Closest Receptor (m)**	~240
Y-Length (m)	1.56	**Type of Receptor**	Worker
Release Height (m)	0	**Pollutant Type**	VOC
		Emission Rate	0.021 lb/hr

Parameters pulled from project S-1103628

Analysis Parameters Unit 236-1 (Amine Tank)			
Source Type	Circular Area	**Location Type**	Rural
Radius (m)	1.83	**Closest Receptor (m)**	~180
		Type of Receptor	Worker
Release Height (m)	4.572	**Pollutant Type**	VOC
		Emission Rate	0.058 lb/hr

Analysis Parameters Unit 237-1 (Fresh Water Tank)			
Source Type	Circular Area	**Location Type**	Rural
Radius (m)	1.83	**Closest Receptor (m)**	~200
		Type of Receptor	Worker
Release Height (m)	4.572	**Pollutant Type**	VOC
		Emission Rate	0.071 lb/hr

Analysis Parameters Unit 238-1 (Produced Water Tank)			
Source Type	Circular Area	**Location Type**	Rural
Radius (m)	1.83	**Closest Receptor (m)**	~195
		Type of Receptor	Worker
Release Height (m)	7.62	**Pollutant Type**	VOC
		Emission Rate	0.071 lb/hr

Analysis Parameters Unit 239-2 (Slop Oil Tank)			
Source Type	Circular Area	**Location Type**	Rural
Radius (m)	1.83	**Closest Receptor (m)**	~190
		Type of Receptor	Worker
Release Height (m)	4.572	**Pollutant Type**	VOC
		Emission Rate	0.058 lb/hr

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **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.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Toxic emissions summary
D. Prioritization score
E. Facility Summary

ATTACHMENT XIII
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-216-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 599 lb, 2nd quarter - 599 lb, 3rd quarter - 599 lb, and 4th quarter - 599 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 7.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit

14. 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-217-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 212 lb, 2nd quarter - 212 lb, 3rd quarter - 212 lb, and 4th quarter -212 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-218-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF O2 REMOVAL SYSTEM WITH 19.5 MMBTU/HR O2 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT) , OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND O2 REMOVAL COOLER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 313 lb, 2nd quarter - 313 lb, 3rd quarter - 313 lb, and 4th quarter - 314 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. ATC shall be implemented concurrently with or subsequent to ATC-2234-218-0. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
9. 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] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
11. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
12. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
13. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
17. O2 removal heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 6 ppmvd NOx @ 3% O2 or 0.007 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

20. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

30. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

31. 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 3% 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 Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

32. 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] Federally Enforceable Through Title V Permit

33. 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 1070, 4305, 4306, and 40 CFR 60.48c(i)] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-219-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF INLET GAS TREATING WITH INLET GAS AMINE CONTACTOR, TREATED GAS COOLER, LEAN GLYCOL COOLER, TREATED GAS FILTER SEPARATOR: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 297 lb, 2nd quarter - 297 lb, 3rd quarter -297 lb, and 4th quarter -297 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services
S-2234-219-1 : Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-220-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF INLET GAS DEHYDRATION WITH MOLECULAR SIEVE DEHYDRATION, DRY GAS DUST FILTER, REGENERATION GAS HEATER, REGENERATION GAS COOLER AND SCRUBBER, AND REGENERATION GAS COOLER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 311 lb, 2nd quarter - 311 lb, 3rd quarter - 311lb, and 4th quarter - 311lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23 % by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-221-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF NGL RECOVERY WITH EXPANDER/BOOSTER COMPRESSOR, GAS/GAS EXCHANGER, COLD SEPARATOR, DEMETHANIZER REBOILERS, DEMETHANIZER, AND DEETHANIZER FEED PUMPS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 334 lb, 2nd quarter - 334 lb, 3rd quarter - 334 lb, and 4th quarter - 335 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit

14. 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] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-222-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF RESIDUE GAS COMPRESSION WITH ELECTRIC MOTOR DRIVEN RESIDUE GAS COMPRESSOR(S), RESIDUE GAS COALESCER(S): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

5. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
7. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of the non-condensable TVR vapors shall not exceed 5.0% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-223-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DEETHANIZER WITH REFLUX CONDENSER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 347 lb, 2nd quarter - 347 lb, 3rd quarter - 347 lb, and 4th quarter - 347 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 74% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-224-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 1573 lb, 2nd quarter - 1573 lb, 3rd quarter - 1574 lb, and 4th quarter - 1574 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 12.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit

13. 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] Federally Enforceable Through Title V Permit

14. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-225-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 1548 lb, 2nd quarter - 1549 lb, 3rd quarter -1549 lb, and 4th quarter - 1549 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

S-2234-225-1 : Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 11.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. 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] Federally Enforceable Through Title V Permit

12. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-226-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF REFRIGERATION SYSTEM WITH REFRIGERANT SUCTION SCRUBBER, REFRIGERANT COMPRESSOR(S) AND COMPRESSOR COMPONENTS, REFRIGERANT FLASH DRUM, REFRIGERANT CONDENSERS AND COMPONENTS, AND REFRIGERANT SURGE DRUM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 2698 lb, 2nd quarter - 2698 lb, 3rd quarter -2698 lb, and 4th quarter -2699 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 21.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. 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] Federally Enforceable Through Title V Permit

12. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-227-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF AMINE SYSTEM WITH AMINE REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 294 lb, 2nd quarter - 294 lb, 3rd quarter -295 lb, and 4th quarter -295 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 21% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-228-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 327 lb, 2nd quarter - 328 lb, 3rd quarter - 328 lb, and 4th quarter - 328 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services
S-2234-228-1 : Dec 22 2015 10:11AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-229-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF PROPANE TANK (EXEMPT), BUTANE TANK (EXEMPT), AND 16,250 GALLON NATURAL GAS TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 3498 lb, 2nd quarter - 3498 lb, 3rd quarter - 3499 lb, and 4th quarter - 3499 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

6. Natural gasoline (NGL) storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 26.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. 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] Federally Enforceable Through Title V Permit

12. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-230-4 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 164 MMBTU/HR HOT OIL HEATER WITH JOHN ZINK C-RMB RAPID MIX ULTRA-LOW NOX BURNER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 1571 lb, 2nd quarter - 1572 lb, 3rd quarter - 1572 lb, and 4th quarter - 1572 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services
S-2234-230-4 : Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

8. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

9. VOC fugitive emissions from the components in gas service on tank shall not exceed 11.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Hot oil heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2 or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

16. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

18. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

19. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

23. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

24. 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 3% 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 Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

26. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-231-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF OVERHEAD GAS SYSTEM WITH FUEL GAS SCRUBBER, ETHANE/CO2 GLYCOL CONTACTOR, ETHANE/CO2 COMPRESSOR(S), ETHANE COOLERS AND ETHANE COOLER COMPONENTS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 129 lb, 2nd quarter - 129 lb, 3rd quarter - 130 lb, and 4th quarter - 130 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 2.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 18 % by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-232-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 1010 lb, 2nd quarter - 1010 lb, 3rd quarter - 1010 lb, and 4th quarter - 1011 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services
S-2234-232-1 : Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 7.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-233-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 2000 GALLON AMINE SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 107 lb, 2nd quarter - 107 lb, 3rd quarter - 107 lb, and 4th quarter - 108 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 21% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-234-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** R23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3000 GALLON GLYCOL SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 70 lb, 2nd quarter - 70 lb, 3rd quarter - 71 lb, and 4th quarter -71 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services
S-2234-234-2 : Dec 22 2015 10:11AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. Monthly average daily throughput shall not exceed 197 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. True Vapor Pressure (TVP) of any organic liquid introduced to or stored in the sump shall not exceed 0.5 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of the tank throughput and TVP of the organic liquid introduced or stored in the sump. [District Rule 1070] Federally Enforceable Through Title V Permit
18. 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]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-235-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 250 MMSCF/DAY EMERGENCY USE SMOKELESS SONIC FLARE WITH FLARE HEADER AND FLARE KNOCK OUT DRUM (REVISED 12/15/10): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 150 lb, 2nd quarter - 150 lb, 3rd quarter - 151 lb, and 4th quarter - 151 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

7. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. VOC content of the non-condensable TVR vapors shall not exceed 16% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit

12. 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 Rule 2201] Federally Enforceable Through Title V Permit

13. Flare shall be equipped with waste gas volume flow metering system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. A flame shall be present at all times when combustible gases are vented through this flare. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Flare shall be equipped with continuous pilot light or automatic re-ignition provisions. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Gas line to flare shall be equipped with operational, volumetric flow rate indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Sulfur compound concentration of gas combusted shall not exceed 1.0 gr S/100 scf (16.9 ppmv H2S). [District Rule 2201] Federally Enforceable Through Title V Permit

18. Only natural gas with a sulfur content not exceeding 1.0 gr S/100scf shall be used as pilot fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

19. This flare shall be operated only during emergency situations. [District Rule 2201] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

20. Maximum amount of gas combusted shall not exceed 267,750 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall measure sulfur content of gas incinerated in flare within 60 days of startup and at least once every year thereafter. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
23. Permittee shall determine sulfur content of gas flared using ASTM method D3246 or double GC for H2S and mercaptans. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
25. Permittee shall keep accurate records of daily and annual quantity of gas combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
27. When combustible gases are vented to the flare, flare shall be equipped with a heat sensing device to detect the presence of a propane or natural gas pilot flame which is burning at all times. [District Rule 4311]
28. The permittee shall maintain monthly records of the number of hours of emergency operation. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
30. 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]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-236-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 190 lb, 2nd quarter - 190 lb, 3rd quarter - 190 lb, and 4th quarter - 191 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of the non-condensable TVR vapors shall not exceed 37% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Storage 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

17. 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] Federally Enforceable Through Title V Permit

18. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

19. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

20. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

21. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit

22. 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] Federally Enforceable Through Title V Permit

23. If a component type for storage 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] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

25. 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]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-237-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 231 lb, 2nd quarter - 231 lb, 3rd quarter -232 lb, and 4th quarter - 232 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of the non-condensable TVR vapors shall not exceed 23 % by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall test and maintain records of VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
13. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Storage 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] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

17. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

18. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

19. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

20. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. If a component type for storage 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. 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]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-238-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 231 lb, 2nd quarter - 231 lb, 3rd quarter -231 lb, and 4th quarter - 231 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall test VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Storage 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] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

17. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

18. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

19. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

20. Upon detection of a gas leak, defined as a VOC concentration of greater than 2,000 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. If a component type for storage 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. 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]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-239-2

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: NW35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 500 BBL SLOP OIL TANK CONNECTED TO EXISTING GAS GATHERING SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 187 lb, 2nd quarter - 187 lb, 3rd quarter - 188 lb, and 4th quarter - 188 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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 Rule 2201] Federally Enforceable Through Title V Permit
6. Storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that routes all VOCs from the storage tank to a field gas gathering system. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. [District Rules 2201and 4623] Federally Enforceable Through Title V Permit
7. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
9. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from tank and from components in piping from tank to vapor control system trunk line shall not exceed 1.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC fugitive emissions from tank vapor control system shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall test VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of Rule 4409. [District Rule 4409] Federally Enforceable Through Title V Permit
17. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit
18. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

19. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

20. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 parts per million by volume (ppmv) for the tank 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] Federally Enforceable Through Title V Permit

21. 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] Federally Enforceable Through Title V Permit

22. If a component type for storage 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-245-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF AMINE TREATING SYSTEM WITH AMINE CONTACTOR; AMINE REGENERATION SYSTEM WITH RE-BOILER HEATED BY HOT OIL SYSTEM; WITH FLASH VESSEL AND AMINE REGENERATION OVERHEAD VAPORS ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 1517 lb, 2nd quarter - 1517 lb, 3rd quarter - 1517 lb, and 4th quarter - 1518 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

S-2234-245-1: Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 7.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-246-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ELECTRICALLY HEATED GLYCOL DEHYDRATION UNIT WITH VAPORS FROM FLASH VESSEL AND STILL VENT ROUTED TO PROCESS SYSTEM INCLUDING OTHER MISCELLANEOUS EQUIPMENT SUCH AS FILTERS, HEAT EXCHANGERS, PUMPS AND VESSELS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 806 lb, 2nd quarter - 806 lb, 3rd quarter - 806 lb, and 4th quarter - 806 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
10. VOC fugitive emissions from the components in gas service on tank shall not exceed 6.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of the non-condensable TVR vapors shall not exceed 23% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-2234-248-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC
MAILING ADDRESS: PO BOX 1001
TUPMAN, CA 93276

LOCATION: GAS PLANT
SECTION SE-35, T-30S, R-23E
TUPMAN, CA

SECTION: SE 14 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 2000 GALLON HORIZONTAL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM WITH VAPORS RETURNED TO A PROCESS STREAM OR TO A GAS GATHERING SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: VOC: 1st quarter - 222 lb, 2nd quarter - 222 lb, 3rd quarter - 222 lb, and 4th quarter - 222 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERCs specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

DRAFT

Arnaud Marjollet, Director of Permit Services

S-2234-248-1 : Dec 22 2015 10:11AM – EDGEHILR : Joint Inspection Required with EDGEHILR

4. ERC Certificate Numbers S-3327-1, S-0829-1, S-2625-1, S-3078-1, S-3077-1, S-3053-1, S-1783-1, S-1777-1, S-1778-1, S-1754-1, S-1782-1, S-4228-1, S-1780-1, S-1775-1, S-2623-1, S-2301-1, S-4140-1, S-3536-1, S-3538-1, S-3166-1, S-3169-1, S-2490-1, S-1706-1, and S-3379-1 (VOC) (or certificate split(s) from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions in piping from tank to vapor control system trunk line shall not exceed 1.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC fugitive emissions associated with the vapor control system shall not exceed 0.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of the non-condensable TVR vapors shall not exceed 23 % by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall test VOC content of the non-condensable TVR vapors no less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The VOC content by weight percent (wt. %) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases. [District Rule 1081] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. Storage tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv) for the tank and 2,000 parts per million by volume (ppmv) for the tank vapor control system , as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
16. Gas-leak concentration shall be determined by EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Storage 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] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

18. 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] Federally Enforceable Through Title V Permit

19. Any tank gauging or sampling device on storage 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] Federally Enforceable Through Title V Permit

20. Operator shall visually inspect storage 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] Federally Enforceable Through Title V Permit

21. Upon detection of a liquid leak from storage tank, 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] Federally Enforceable Through Title V Permit

22. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 parts per million by volume (ppmv) for the tank and 2,000 parts per million by volume (ppmv) for the tank vapor control system 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] Federally Enforceable Through Title V Permit

23. 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] Federally Enforceable Through Title V Permit

24. If a component type for storage 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] Federally Enforceable Through Title V Permit

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] Federally Enforceable Through Title V Permit

26. 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] Federally Enforceable Through Title V Permit

DRAFT