



APR 2 6 2016

Juan Campos California Resources Elk Hills Inc. 11109 River Run Blvd Bakersfield, CA 93311

Final - Authority to Construct / Certificate of Conformity (Minor Modification) RE:

Facility Number: S-2234 Project Number: S-1153552

Dear Mr. Campos:

The Air Pollution Control Officer has issued the Authority to Construct permits to California Resources Elk Hills Inc for modifications to a gas plant in Western Kern County. Enclosed are the Authority to Construct permit and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the Authority to Construct permit was published on January 19, 2016. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on January 13, 2016. All comments received following the District's preliminary decision on this project were considered.

Comments received by the District during the public notice period resulted in minor changes due to public comment. These comments and the District responses to comments are included as an enclosure. These changes were minor and did not trigger additional public notification requirements, nor did they have any impact upon the Best Available Control Technology determination or on the amount of offsets required for project approval.

Prior to operating with the modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5. Application forms have been enclosed for your use. These forms may also be found on the District's website at www.valleyair.org.

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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 Mr. Juan Campos Page 2

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

Arnaud Marjollet

Director of Permit Services

AM:rue

Enclosures

cc: Tung Le, CARB (w/enclosure) via email

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

EPA Comments for Proposed ATC/COC (Title V Minor Modification) Evaluation for California Resources Elk Hills (CREH), Facility ID S-2234, Project # S-1153552

Comment 1:

As specified in the District's BACT Guideline 7.2.7, BACT for the valves, connectors and compressor and pump seals for a natural gas processing plant is meet by defining a leak 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 (I&M) Program (I&M) pursuant to District Rule 4409. EPA notes that there are two separate requirements to be met in order to satisfy BACT. First, the specified types of equipment cannot operate with leaks above the specified emission rates. Second, the facility must implement an I&M program pursuant to Rule 4409.

Using the proposed ATC for unit S-2234-221-1 as an example, it appears Conditions 9 and 14 are intended to satisfy the specified BACT requirements. EPA notes however that Condition 14 is not specific about the need for an Inspection and Maintenance Program and that Rule 4409 only refers to a District approved Operator Management Plan. Please add Rule 2201 as the basis for Condition 14, since this condition is used to satisfy BACT and/or add a more specific condition regarding the BACT required Inspection and Maintenance Program requirements.

District Response to EPA Comment 1

Condition # 14 referenced above has been revised to reference District Rule 2201.

Comment 2:

Upon an initial review of the evaluation for the proposed project revision, it appears the source is relaxing emission rates which define what a leak is for certain components, which raised the issue of whether the project was proposing to relax existing BACT emission thresholds. However, after discussion with the project engineer, EPA is satisfied that that the emission rate limits which define BACT are not being revised, but instead the emission rates which define a leak for the purposes of leak detection or a leak Inspection and Maintenance Program, are the emission rate limits that are being revised with this proposed permit action. The BACT requirement to implement an I&M program only requires leak emission rate standards that are consistent with Rule 4409.

The District clarified that these allowable leak detection rates are the basis for determining the allowable potential to emit of the facility, and in turn determines the amount of offsets required. The facility was originally granted an ATC and PTO based on leak average rates lower than those typically assumed by the District, in part to reduce the number of offsets required. Because the outcome of this project will be to

increase the allowable leak detection emission rates to values normally assumed for a gas plant, the PTE of the facility will be increased, and therefore additional offsets are required. Please revise the District's evaluation document to provide a brief discussion of this aspect of the revision as part of the Title V statement of basis.

District Response to EPA Comment 2

The following sentences (in strikeout text) were replaced by the following paragraphs (italic text) in the Proposal section of the District's Evaluation document:

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.

Please note that the BACT emissions thresholds are not being relaxed by the project. With BACT, the leak definition triggering Inspection and Maintenance (I&M) Program (I&M) pursuant to District Rule 4409 are 100 ppmv for valves and 500 ppmv for pumps and compressors.

The current Daily Emissions Limits (DELs) for the permit units are calculated using EPA Average Leak Rate (ALR) Emissions factors with a maximum leak threshold of 2,000 ppmv. Leaks above 2,000 ppmv are a violation of the permit and are subject to the Inspection and Maintenance (I&M) Program pursuant to District Rule 4409 as required by BACT.

For this project, applicant has requested that fugitive emissions be based on use of CAPCOA Screening Range Emissions Factors with a maximum leak threshold of 10,000 ppmv. A prescribed amount of leaks above 10,000 ppmv are allowed. Leaks above 10,000 ppmv are subject to the Inspection and Maintenance (I&M) Program pursuant to District Rule 4409 as required by BACT. Note that the proposed increase in the maximum leak threshold used for the fugitive emissions calculations (2,000 ppmv to 10,000 ppmv) results in an increase in DEL triggering BACT, offsets, and public notice.

The revised Page 1 of the Engineering Evaluation follows.

Authority to Construct Application Review

Revise Fugitive Emissions from Cryogenic Gas Plant

Revised 1st Page of Engineering Evaluation in Response to EPA Comments received 4/14/16

Facility Name:

California Resources Elk Hills, LLC

Date: December 22, 2015

Mailing Address:

10800 Stockdale Hwy Bakersfield, CA 93311

Engineer:

Lead Engineer:

Richard Edgehill

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

1. Proposal

California Resources Elk Hills, LLC (CREH) is requesting Authorities to Construct (ATC) to authorize modification of twenty-seven (27) 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.

Please note that the BACT emissions thresholds are not being relaxed by the project. With BACT, the leak definition triggering Inspection and Maintenance (I&M) Program (I&M) pursuant to District Rule 4409 are 100 ppmv for valves and 500 ppmv for pumps and compressors.

The current Daily Emissions Limits (DELs) for the permit units are calculated using EPA Average Leak Rate (ALR) Emissions factors with a maximum leak threshold of 2,000 ppmv. Leaks above 2,000 ppmv are a violation of the permit and are subject to the Inspection and Maintenance (I&M) Program pursuant to District Rule 4409 as required by BACT.

For this project, applicant has requested that fugitive emissions be based on use of CAPCOA Screening Range Emissions Factors with a maximum leak threshold of 10,000 ppmv. A prescribed amount of leaks above 10,000 ppmv are allowed. Leaks above 10,000 ppmv are subject to the Inspection and Maintenance (I&M) Program

pursuant to District Rule 4409 as required by BACT. Note that the proposed increase in the maximum leak threshold used for the fugitive emissions calculations (2,000 ppmv to 10,000 ppmv) results in an increase in DEL triggering BACT, offsets, and public notice.





Facility # S-2234 CALIFORNIA RESOURCES ELK HILLS, LLC 11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

AUTHORITY TO CONSTRUCT (ATC) QUICK START GUIDE

- 1. Pay Invoice: Please pay enclosed invoice before due date.
- 2. Modify Your Title V Permit. Prior to operating the equipment authorized under this ATC, submit an application to modify your Title V permit. See application forms at http://www.valleyair.org/busind/pto/ptoforms/1ptoformidx.htm.
- 3. Fully Understand ATC: Make sure you understand ALL conditions in the ATC prior to construction, modification and/or operation.
- 4. Follow ATC: You must construct, modify and/or operate your equipment as specified on the ATC. Any unspecified changes may require a new ATC.
- 5. Notify District: You must notify the District's Compliance Department, at the telephone numbers below, upon start-up and/or operation under the ATC. Please record the date construction or modification commenced and the date the equipment began operation under the ATC. You may NOT operate your equipment until you have notified the District's Compliance Department. A startup inspection may be required prior to receiving your Permit to Operate.
- 6. Source Test: Schedule and perform any required source testing. See http://www.valleyair.org/busind/comply/source_testing.htm for source testing resources.
- 7. Maintain Records: Maintain all records required by ATC. Records are reviewed during every inspection (or upon request) and must be retained for at least 5 years.

By operating in compliance, you are doing your part to improve air quality for all Valley residents.

For assistance, please contact District Compliance staff at any of the telephone numbers listed below.

> Seved 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



Due Date 6/17/2016 Amount Due \$ 5,395.40

Amount Enclosed

ATCFEE S1153552 2234 S126413 4/18/2016

RETURN THIS TOP PORTION ONLY, WITH REMITTANCE TO:

CALIFORNIA RESOURCES ELK HILLS, LLC 11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

SJVAPCD 34946 Flyover Court Bakersfield, CA 93308

Thank You!



San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

SJVAPCD Tax ID: 77-0262563

Facility ID S2234

Invoice Date
4/18/2016

Invoice Number S126413

Invoice Type
Project: S1153552

CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT SECTION SE-35, T-30S, R-23E TUPMAN, CA

PROJECT NUMBER: 1153552

APPLICATION FILING FEES
ENGINEERING TIME FEES
TOTAL FEES
LESS PREVIOUSLY PAID PROJECT FEES APPLIED TO THIS INVOICE
PROJECT FEES DUE (Enclosed is a detailed statement outlining the fees for each item.)

\$ 2,025.00 \$ 3,370.40 \$ 5,395.40

\$ 5,395,40

\$ 0.00

Late Payment (see Rule 3010, Section 11.0 Late Fees)

Postmarked

After 6/17/2016 through 6/27/2016

After 6/27/2016 After 7/17/2016 Total Due

\$ 5,934.94 \$ 8,093.10

Permits To Operate MAY BE SUSPENDED

San Joaquin Valley Air Pollution Control District 34946 Flyover Court, Bakersfield, CA 93308, (661) 392-5500, Fax (661) 392-5585

Invoice Detail

Facility ID: S2234

CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT SECTION SE-35, T-30S, R-23E TUPMAN, CA

Invoice Nbr: \$126413 Invoice Date: 4/18/2016

Page: 1

Application Filing Fees

Project Nbr	Permit Number	Description Ap	plication Fee
S1153552	S-2234-216-1	MODIFICATION OF INLET GAS SYSTEM WITH ELECTRIC MOTOR DRIVEN INLET GAS COMPRESSOR(S): REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-217-1	MODIFICATION OF MERCURY REMOVAL SYSTEM WITH INLET GAS FILTER SEPARATOR, MERCURY GUARD BED: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
31153552	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	\$ 75.00
S1153552	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	\$ 75,00
31153552	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	\$ 75.00
S1153552	S-2234-221-1	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	\$ 75.00
31153552	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	\$ 75.00
1153552	S-2234-223-1	MODIFICATION OF DEETHANIZER WITH REFLUX CONDENSER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
1153552	S-2234-224-1	MODIFICATION OF DEPROPANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
31153552	S-2234-225-1	MODIFICATION OF DEBUTANIZER WITH REFLUX CONDENSERS AND REFLUX DRUMS: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
31153552	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	\$ 75.00
51153552	S-2234-227-1	MODIFICATION OF AMINE SYSTEM WITH AMINE REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-228-1	MODIFICATION OF GLYCOL SYSTEM WITH GLYCOL REGENERATION PACKAGE: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00

Invoice Detail

Facility ID: S2234

CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT SECTION SE-35, T-30S, R-23E TUPMAN, CA

Invoice Nbr: \$126413 Invoice Date: 4/18/2016

Page: 2

Project Nbr	Permit Number	Description	Application Fee
S1153552	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	\$ 75.00
S1153552	S-2234-230-4	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	\$ 75.00
S1153552	S-2234-231-1	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	\$ 75.00
S1153552	S-2234-232-1	MODIFICATION OF METHANOL INJECTION SYSTEM WITH PERMIT EXEMPT (<250 GALLON) METHANOL TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-233-2	MODIFICATION OF 2000 GALLON AMINE SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-234-2	MODIFICATION OF 3000 GALLON GLYCOL SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-235-2	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	\$ 75.00
S1153552	S-2234-236-1	MODIFICATION OF 300 BBL AMINE STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-237-1	MODIFICATION OF 300 BBL FRESH WATER TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-238-1	MODIFICATION OF 500 BBL PRODUCED WATER STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	S-2234-239-2	MODIFICATION OF 500 BBL SLOP OIL TANK CONNECTED TO EXISTING GAS GATHERING SYSTEM: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS	\$ 75.00
S1153552	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	\$ 75.00
S1153552	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	\$ 75.00

Invoice Detail

Facility ID: S2234

CALIFORNIA RESOURCES ELK HILLS, LLC

GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

Invoice Nbr:

S126413

Invoice Date: 4/18/2016

Page:

3

Project Nor Permit Numbe	r Description ,	Application Fee
S1153552 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	\$ 75.00

Total Application Filing Fees: \$ 2,025.00

Engineering Time Fees

Project Nbr.	Quantity	Rate	Description	Fee
S1153552	50.9 hours	\$ 106.00 /h	Standard Engineering Time	\$ 5,395.40
			Less Credit For Application Filing Fees	(\$ 2,025.00)
			Standard Engineering Time SubTotal	\$ 3,370.40

Total Engineering Time Fees: \$ 3,370.40

Account Summary

Facility ID: S2234

CALIFORNIA RESOURCES ELK HILLS, LLC GAS PLANT SECTION SE-35, T-30S, R-23E TUPMAN, CA

Statement Date:

4/18/2016

Invoice Date	Invoice Number	Invoice Due Date	Description of Fees		entropolitant de Centre Robert de politica de la	Amount Due
04/11/2016	S126200	06/13/2016		Fees Invoiced Payments Balance Due	\$ 10,066.30 (\$ 355.00)	\$ 9,711.30
04/14/2016 04/18/2016	S126340 S126413	06/13/2016 06/17/2016	15/16 Annual Air Toxic Assessment Project: S1153552			\$ 1,163.00 \$ 5,395.40
				Total Outstandi	ing Balance:	\$ 16,269.70

As of 4/18/2016, our records indicate you have unallocated credits of (\$ 1,256.38) which could be applied to outstanding invoices. If you would like to apply any unallocated credits to outstanding invoices, please contact the SJVAPCD Finance department at (661) 392-5500.





PERMIT NO: S-2234-216-1 **ISSUANCE DATE: 04/18/2016**

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

Mariollet, Director of Permit Services

- 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
- 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, District Rule 2201, 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





PERMIT NO: S-2234-217-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

LOCATION: GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: NW35 TOWNSHIP: 308 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. 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. 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

As Faud Marjollet, Director of Permit Services

- 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-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, District Rule 2201, 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





PERMIT NO: S-2234-218-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

LOCATION: GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: NW35 TOWNSHIP: 30S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 02 REMOVAL SYSTEM WITH 19.5 MMBTU/HR 02 HEATER WITH COEN C-RMB RAPID MIX ULTRA LOW NOX BURNER (OR EQUIVALENT), OXYGEN REMOVAL REACTOR, OXYGEN REMOVAL DISCHARGE COOLER AND SCRUBBER AND 02 REMOVAL COOLER: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK REQUIREMENTS

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. 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

Mand Mariollet, Director of Permit Services

- 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-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]
- 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

- 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

- 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, District Rule 2201, 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





PERMIT NO: S-2234-219-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

and Marjollet, Director of Permit Services

- 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-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, District Rule 2201, 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





PERMIT NO: S-2234-220-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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. 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. 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

Marjollet, Director of Permit Services

20-1 Apr 20 2016 12 52PM - EDGEHILR Joint Inspection Reculred 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-221-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

LOCATION:

GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: NW35 TOWNSHIP: 308 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

- 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
- 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
- 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

maud Marjollet, Director of Permit Services

- 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-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, District Rule 2201, 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





PERMIT NO: S-2234-222-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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. 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. 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

Arriaud Marjollet, Director of Permit Services

- 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
- 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, District Rule 2201, 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





PERMIT NO: S-2234-223-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

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. 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. 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.

Seved Sadredin, Executive Director / APCO

Amaud Marjollet, Director of Permit Services

- 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, District Rule 2201, 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





PERMIT NO: S-2234-224-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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

- 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 22011 Federally Enforceable Through Title V Permit
- 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
- 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.

Seved Sadredin, Executive Director / APCO

Amand Marjollet, Director of Permit Services

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-225-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

neud Marjollet, Director of Permit Services

- 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-1778-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-226-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

Arnaud Marjollet, Director of Permit Services

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-227-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-228-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-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, District Rule 2201, 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





PERMIT NO: S-2234-229-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

DARENOFIEED, OA S

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. 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. 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.

Seved Sadredin, Executive Director / APCO

- 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-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, District Rule 2201, 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





PERMIT NO: S-2234-230-4

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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

- 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, District Rule 2201, 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





PERMIT NO: S-2234-231-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-232-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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. 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. 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

Arnaud Marjollet, Director of Permit Services 5-2234-233-1: Apr 20 2016 12 52PM - 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-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, District Rule 2201, 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





PERMIT NO: S-2234-233-2

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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
- 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, District Rule 2201, 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





PERMIT NO: S-2234-234-2

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

LOCATION:

GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: NW35 TOWNSHIP: 308 RANGE: R23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3000 GALLON GLYCOL SUMP TANK: REVISE FUGITIVE EMISSION CALCULATIONS AND LEAK

REQUIREMENTS

CONDITIONS

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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]





PERMIT NO: S-2234-235-2

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

- 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-1778-1, S-1782-1, 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
- 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

- 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, District Rule 2201, 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]





PERMIT NO: S-2234-236-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

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. 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. 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

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Seyed Sadredin, Executive Director / APCO

Amaud Marjollet, Director of Permit Services 12234-238-1 Apr 20 2018 12 52PM - EDGEHILR Joint Inspection Regulated with EDGEHILR

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-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

- 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]





PERMIT NO: S-2234-237-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

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Seyed Sadredin, Executive Director / APCO

- 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-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 25 a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25 a 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

- 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]





PERMIT NO: S-2234-238-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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

TIDMAN CA

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

- 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. 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.

Seved Sadredin, Executive Director / APCO

- 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-1778-1, 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
- 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
- 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

- 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]





PERMIT NO: S-2234-239-2

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD BAKERSFIELD, CA 93311

LOCATION:

GAS PLANT

SECTION SE-35, T-30S, R-23E

TUPMAN, CA

SECTION: NW35 TOWNSHIP: 308 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

- 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
- 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
- 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.

Seved Sadredin, Executive Director / APCO

- 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-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 2201 and 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

- 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





PERMIT NO: S-2234-245-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD
BAKERSFIELD, CA 93311

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. 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. 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.

Seved Sadredin, Executive Director / APCO

Sepaud Marjollet, Director of Permit Services
\$224-2451: Apt 20 2016 12 522M - 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, District Rule 2201, 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





PERMIT NO: S-2234-246-1 ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS: 11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311
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. 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. 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.

Seved Sadredin, Executive Director / APCO

- 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-1778-1, S-1782-1, 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, District Rule 2201, 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





PERMIT NO: S-2234-248-1

ISSUANCE DATE: 04/18/2016

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS, LLC

MAILING ADDRESS:

11109 RIVER RUN BLVD

BAKERSFIELD, CA 93311

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

- 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
- 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
- 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

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Seyed Sadredin, Executive Director / APCO

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- 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 2201 and 4623] Federally Enforceable Through Title V Permit

- 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 25 a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25 a 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