

July 12, 2021

Mr. Juan Campos
California Resources Elk Hills, LLC
900 Old River Road
Bakersfield, CA 93311

Re: Final - Authorities to Construct / Certificates of Conformity (Significant Mod)
Facility Number: S-2234
Project Number: S-1203245

Dear Mr. Campos:

The Air Pollution Control Officer has issued Authorities to Construct (ATCs) S-2234-8-6, '-14-6, '-204-5, '-205-5, '-235-5 and '-250-0 with Certificates of Conformity to California Resources Elk Hills, LLC at Sections 34 and 35, Township 30S, Range 23E in the Elk Hills Oil Field. The project authorizes modification to flares. Enclosed are the ATCs and a copy of the notice of final action that has been posted on the District's website (www.valleyair.org).

Notice of the District's preliminary decision to issue the ATCs was posted on May 25, 2021. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on May 24, 2021. No comments were received following the District's preliminary decision on this project.

Also enclosed is an invoice for the engineering evaluation fees pursuant to District Rule 3010. Please remit the amount owed, along with a copy of the attached invoice, within 60 days.

Prior to operating with the modifications authorized by the ATCs, 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 are found on the District's website at www.valleyair.org/permits/TVforms.

Samir Sheikh
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

July 12, 2021

Mr. Juan Campos
Page 2

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

Sincerely,

A handwritten signature in blue ink that reads "Brian Clements". The signature is written in a cursive style with a large initial 'B'.

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Laura Yannayon, EPA (w/enclosure) via EPS

Facility # S-2234
CALIFORNIA RESOURCES ELK HILLS LLC
900 OLD RIVER RD
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/permits/TVforms>.
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. Sample record keeping forms can be found at http://www.valleyair.org/busind/comply/compliance_forms.htm.

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.

Samir Sheikh

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: (861) 392-5500 FAX: (861) 392-5585

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-8-6

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
BAKERSFIELD, CA 93311

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

SECTION: 35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 104.6 MMBTU/HR LOW PRESSURE FLARE SERVING LTS #2 PLANT: INCREASE DAILY AND ANNUAL VENT GAS AND PILOT GAS SLC LIMITS AND ADD S-2234-250 TO SLC

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 surplus VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,825 lb, 2nd quarter - 1,825 lb, 3rd quarter - 1,825 lb, and 4th quarter - 1,825 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC specified below. [District Rule 2201]
4. ERC Certificate Number S-4747-1 and S-5003-1 (or a certificate split from this certificate) 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]

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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-8-6 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

5. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
7. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
8. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. A flame shall be present at all times in the flare whenever combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
11. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
12. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
13. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
14. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb-CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The operator shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day; 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; 3) If vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; 4) If the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine the flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; and 8) A flow verification report. The flow verification report shall include flow verification testing using approved test methods. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
25. Operators subject to vent gas composition monitoring requirements shall use the following test methods as appropriate, or by an alternative method approved by the APCO, ARB and EPA: Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
26. If vent gas composition is monitored with a continuous analyzer employing gas chromatography the minimum sampling frequency shall be one sample every 30 minutes. If vent gas composition is monitored using continuous analyzers not employing gas chromatography, the total reduced sulfur content of vent gas shall be determined by using EPA Method D4468-85. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
27. Vent gas flow shall be determined using one or more of the following methods, or by any alternative method approved by the APCO, ARB, and EPA: 1) EPA Methods 1 and 2; 2) A verification method recommended by the manufacturer of the flow monitoring equipment installed; 3) Tracer gas dilution or velocity; or 4) Other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 4311, 6.3.5] Federally Enforceable Through Title V Permit

28. The operator shall monitor vent gas composition using one of the following five methods as appropriate. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header. The operator shall provide the APCO with access to the monitoring system to collect vent gas samples to verify the analysis. 1) Sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours. (b) Samples shall be analyzed using approved test methods; or 2) Integrated sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 SCFM, integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less. (b) Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to part (a), a new sample container shall be placed in service within one hour after the previous sample was filled. A sample container shall not be used for a sampling period that exceeds 24 hours. (c) Samples shall be analyzed using approved test methods; or 3) Continuous analyzers that meet the following requirements: (a) The analyzers shall continuously monitor for total hydrocarbon methane, and depending upon the analytical method used pursuant to Section 6.3.4, hydrogen sulfide or total reduced sulfur. (b) The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon. (c) Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale; or 4). Continuous analyzers employing gas chromatography that meet the following requirements: (a) The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide. (b) The gas chromatography system shall be maintained to be accurate within 5% of full scale; or 5) Monitor sulfur content using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested using approved test methods. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit
29. Permittee shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
30. The operator of a flare with a water seal shall monitor and record the water level and pressure of the water seal daily or as specified on the Permit to Operate. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
31. Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
32. During periods of inoperation of continuous analyzers or auto-samplers, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed using approved test methods. During periods of inoperation of flow monitors, flow shall be calculated using good engineering practices. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
33. Permittee shall maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
34. All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
35. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]

36. Permittee shall maintain a copy of annual reports submitted to the APCO. [District Rule 4311, 6.1.6] Federally Enforceable Through Title V Permit
37. Records of flare maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of all monitoring data collected. [District Rule 4311, 6.1.7] Federally Enforceable Through Title V Permit
39. Compliance with the requirements for this permit unit shall be deemed compliance with District Rules 4201. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-14-6

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
BAKERSFIELD, CA 93311

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

SECTION: 35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 05.6 MMBTU/HR LOW PRESSURE FLARE SERVING LTS #1 PLANT: INCREASE DAILY AND ANNUAL VENT GAS AND PILOT GAS SLC LIMITS AND ADD S-382-74 TO SLC

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. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
6. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] 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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-14-6 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. A flame shall be present at all times in the flare whenever combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
9. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
10. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
11. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
12. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb-CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

22. The operator shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day; 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; 3) If vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; 4) If the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine the flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; and 8) A flow verification report. The flow verification report shall include flow verification testing using approved test methods. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Operators subject to vent gas composition monitoring requirements shall use the following test methods as appropriate, or by an alternative method approved by the APCO, ARB and EPA: Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. If vent gas composition is monitored with a continuous analyzer employing gas chromatography the minimum sampling frequency shall be one sample every 30 minutes. If vent gas composition is monitored using continuous analyzers not employing gas chromatography, the total reduced sulfur content of vent gas shall be determined by using EPA Method D4468-85. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
25. Vent gas flow shall be determined using one or more of the following methods, or by any alternative method approved by the APCO, ARB, and EPA: 1) EPA Methods 1 and 2; 2) A verification method recommended by the manufacturer of the flow monitoring equipment installed; 3) Tracer gas dilution or velocity; or 4) Other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 4311, 6.3.5] Federally Enforceable Through Title V Permit
26. The operator shall monitor vent gas composition using one of the following five methods as appropriate. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header. The operator shall provide the APCO with access to the monitoring system to collect vent gas samples to verify the analysis. 1) Sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours. (b) Samples shall be analyzed using approved test methods; or 2) Integrated sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 SCFM, integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less. (b) Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to part (a), a new sample container shall be placed in service within one hour after the previous sample was filled. A sample container shall not be used for a sampling period that exceeds 24 hours. (c) Samples shall be analyzed using approved test methods; or 3) Continuous analyzers that meet the following requirements: (a) The analyzers shall continuously monitor for total hydrocarbon methane, and depending upon the analytical method used pursuant to Section 6.3.4, hydrogen sulfide or total reduced sulfur. (b) The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon. (c) Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale; or 4). Continuous analyzers employing gas chromatography that meet the following requirements: (a) The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide. (b) The gas chromatography system shall be maintained to be accurate within 5% of full scale; or 5) Monitor sulfur content using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested using approved test methods. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit

27. Permittee shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
28. The operator of a flare with a water seal shall monitor and record the water level and pressure of the water seal daily or as specified on the Permit to Operate. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
29. Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
30. During periods of inoperation of continuous analyzers or auto-samplers, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed using approved test methods. During periods of inoperation of flow monitors, flow shall be calculated using good engineering practices. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
31. Permittee shall maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
32. All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
33. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]
34. Permittee shall maintain a copy of annual reports submitted to the APCO. [District Rule 4311, 6.1.6] Federally Enforceable Through Title V Permit
35. Records of flare maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of all monitoring data collected. [District Rule 4311, 6.1.7] Federally Enforceable Through Title V Permit
37. Compliance with the requirements for this permit unit shall be deemed compliance with District Rules 4201. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-204-5

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
BAKERSFIELD, CA 93311

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

SECTION: 35 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 7,300 MMBTU/HR HIGH PRESSURE FLARE SERVING LTS #1 PLANT: INCREASE DAILY AND ANNUAL VENT GAS AND PILOT GAS SLC LIMITS AND ADD S-382-74 TO SLC

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. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
6. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] 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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-204-5 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. A flame shall be present at all times in the flare whenever combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
9. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
10. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
11. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
12. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb-CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

22. The operator shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day; 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; 3) If vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; 4) If the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine the flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; and 8) A flow verification report. The flow verification report shall include flow verification testing using approved test methods. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Operators subject to vent gas composition monitoring requirements shall use the following test methods as appropriate, or by an alternative method approved by the APCO, ARB and EPA: Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. If vent gas composition is monitored with a continuous analyzer employing gas chromatography the minimum sampling frequency shall be one sample every 30 minutes. If vent gas composition is monitored using continuous analyzers not employing gas chromatography, the total reduced sulfur content of vent gas shall be determined by using EPA Method D4468-85. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
25. Vent gas flow shall be determined using one or more of the following methods, or by any alternative method approved by the APCO, ARB, and EPA: 1) EPA Methods 1 and 2; 2) A verification method recommended by the manufacturer of the flow monitoring equipment installed; 3) Tracer gas dilution or velocity; or 4) Other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 6.3.4] Federally Enforceable Through Title V Permit
26. The operator shall monitor vent gas composition using one of the following five methods as appropriate. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header. The operator shall provide the APCO with access to the monitoring system to collect vent gas samples to verify the analysis. 1) Sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours. (b) Samples shall be analyzed using approved test methods; or 2) Integrated sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 SCFM, integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less. (b) Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to part (a), a new sample container shall be placed in service within one hour after the previous sample was filled. A sample container shall not be used for a sampling period that exceeds 24 hours. (c) Samples shall be analyzed using approved test methods; or 3) Continuous analyzers that meet the following requirements: (a) The analyzers shall continuously monitor for total hydrocarbon methane, and depending upon the analytical method used pursuant to Section 6.3.4, hydrogen sulfide or total reduced sulfur. (b) The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon. (c) Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale; or 4). Continuous analyzers employing gas chromatography that meet the following requirements: (a) The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide. (b) The gas chromatography system shall be maintained to be accurate within 5% of full scale; or 5) Monitor sulfur content using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested using approved test methods. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit

27. Permittee shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
28. The operator of a flare with a water seal shall monitor and record the water level and pressure of the water seal daily or as specified on the Permit to Operate. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
29. Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
30. During periods of inoperation of continuous analyzers or auto-samplers, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed using approved test methods. During periods of inoperation of flow monitors, flow shall be calculated using good engineering practices. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
31. Permittee shall maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
32. All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
33. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]
34. The permittee shall maintain a copy of annual reports submitted to the APCO. [District Rule 4311, 6.1.6] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of all monitoring data collected. [District Rule 4311, 6.1.7] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-205-5

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
BAKERSFIELD, CA 93311

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

SECTION: 34 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 7,300 MMBTU/HR HIGH PRESSURE FLARE SERVING LTS #2 PLANT: INCREASE DAILY AND ANNUAL VENT GAS AND PILOT GAS SLC LIMITS AND ADD S-382-74 TO SLC

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. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
6. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] 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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-205-5 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. A flame shall be present at all times in the flare whenever combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
9. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
10. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
11. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
12. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb-CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

22. The operator shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day; 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; 3) If vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; 4) If the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine the flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; and 8) A flow verification report. The flow verification report shall include flow verification testing using approved test methods. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Operators subject to vent gas composition monitoring requirements shall use the following test methods as appropriate, or by an alternative method approved by the APCO, ARB and EPA: Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. If vent gas composition is monitored with a continuous analyzer employing gas chromatography the minimum sampling frequency shall be one sample every 30 minutes. If vent gas composition is monitored using continuous analyzers not employing gas chromatography, the total reduced sulfur content of vent gas shall be determined by using EPA Method D4468-85. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
25. Vent gas flow shall be determined using one or more of the following methods, or by any alternative method approved by the APCO, ARB, and EPA: 1) EPA Methods 1 and 2; 2) A verification method recommended by the manufacturer of the flow monitoring equipment installed; 3) Tracer gas dilution or velocity; or 4) Other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 6.3.4] Federally Enforceable Through Title V Permit
26. The operator shall monitor vent gas composition using one of the following five methods as appropriate. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header. The operator shall provide the APCO with access to the monitoring system to collect vent gas samples to verify the analysis. 1) Sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours. (b) Samples shall be analyzed using approved test methods; or 2) Integrated sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 SCFM, integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less. (b) Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to part (a), a new sample container shall be placed in service within one hour after the previous sample was filled. A sample container shall not be used for a sampling period that exceeds 24 hours. (c) Samples shall be analyzed using approved test methods; or 3) Continuous analyzers that meet the following requirements: (a) The analyzers shall continuously monitor for total hydrocarbon methane, and depending upon the analytical method used pursuant to Section 6.3.4, hydrogen sulfide or total reduced sulfur. (b) The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon. (c) Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale; or 4). Continuous analyzers employing gas chromatography that meet the following requirements: (a) The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide. (b) The gas chromatography system shall be maintained to be accurate within 5% of full scale; or 5) Monitor sulfur content using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested using approved test methods. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit

27. Permittee shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
28. The operator of a flare with a water seal shall monitor and record the water level and pressure of the water seal daily or as specified on the Permit to Operate. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
29. Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
30. During periods of inoperation of continuous analyzers or auto-samplers, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed using approved test methods. During periods of inoperation of flow monitors, flow shall be calculated using good engineering practices. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
31. Permittee shall maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
32. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]
33. All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
34. Permittee shall maintain a copy of annual reports submitted to the APCO. [District Rule 4311, 6.1.6] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of all monitoring data collected. [District Rule 4311, 6.1.7] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-235-5

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
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 SMOKELESS FLARE WITH FLARE HEADER AND FLARE KNOCKOUT DRUM:
INCREASE DAILY AND ANNUAL VENT GAS AND PILOT GAS SLC LIMITS AND ADD S-382-74 TO SLC

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. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rule 2201] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-235-5 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

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). Emissions shall be calculated after each quarterly inspection period as required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
7. This permit allows for a specified percentage of allowed leaking components as defined in this permit to be discovered within prescribed time frames under Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
8. 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 shall not exceed 1.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content of gas processed shall not exceed 16% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall test and maintain records of VOC content of gas processed 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. 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
15. 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
16. Flare shall be equipped with continuous pilot light or automatic re-ignition provisions. [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. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb- CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
29. The operator shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day; 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; 3) If vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; 4) If the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine the flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; and 8) A flow verification report. The flow verification report shall include flow verification testing using approved test methods. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
30. 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
31. 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
32. 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
33. Permittee shall keep accurate records of daily and annual quantity of gas combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
34. 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
35. 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]
36. 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
37. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

38. 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]

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-250-0

ISSUANCE DATE: 07/12/2021

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS: 900 OLD RIVER RD
BAKERSFIELD, CA 93311

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

EQUIPMENT DESCRIPTION:

535.5 MMBTU/HR AIR ASSISTED FLARE INCLUDING KNOCKOUT DRUM CAPABLE OF RECEIVING VENT GAS FROM HPI AND 35R GAS PLANT, SARASOTA AUTOMATION MODEL FM771 CONTINUOUS RECORDING FLOW METER, INLET GAS NOZZLE, FLARE STACK RISER, AND FLARE TIP (FLARE ALSO PERMITTED AS S-382-74)

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. ATCs S-2234-8-6, '-14-6, '-204-5, '-205-5, and '-235-5 and 250-0 shall be implemented concurrently [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of vent gas combusted in the flare shall be installed, utilized and maintained [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of pilot gas combusted shall be installed, utilized and maintained [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.

Samir Sheikh, Executive Director / APCO



Brian Clements, Director of Permit Services

S-2234-250-0 : Jul 12 2021 11:35AM -- RINALDIR : Joint Inspection Required with RINALDIR

6. Operation shall include gas riser, flare pilot, 20 hp (minimum) primary combustion air blower, 112 hp (minimum) secondary combustion air blower, and main air inlet nozzle and air duct. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Primary combustion air fan shall be capable of delivering at least 20,000 cfm @ 5 inches static pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Secondary combustion air fan shall be capable of delivering at least 100,000 cfm @ 4.5 inches static pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Flare shall incinerate gases from HPI and 35R gas plant facility only. [District Rule 2201] Federally Enforceable Through Title V Permit
10. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Vent gas emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Pilot emission rates from this unit shall not exceed any of the following limits: NO_x - 0.094 lb/MMBtu; VOC - 0.0055 lb/MMBtu; CO - 0.04 lb/MMBtu; PM₁₀ - 0.0076 lb/MMBtu; or SO_x - 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Combined daily vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 41,238 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Combined annual vent gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 371,025 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Combined daily vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 2,802.2 lb-NO_x; 117.5 lb-SO_x; 329.9 lb-PM₁₀; 15,258.1 lb-CO; 2,642.1 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined annual vent gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 25,231 lb-NO_x; 1,057 lb-SO_x; 2,968 lb-PM₁₀; 137,279 lb-CO; 23,375 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined daily pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 150 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Combined annual pilot gas heat input from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed 58,000 MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combined daily pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 14.1 lb-NO_x; 0.4 lb-SO_x; 1.1 lb-PM₁₀; 6.0 lb-CO; 0.8 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined annual pilot gas emissions from permit units S-2234-8, -14, -204, -205, - 235, and '-250 shall not exceed any of the following: 5,452 lb-NO_x; 165 lb-SO_x; 441 lb-PM₁₀; 2,320 lb-CO; 319 lb-VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
22. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
23. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
25. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311]
26. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
27. Operators subject to vent gas composition monitoring requirements shall use the following test methods as appropriate, or by an alternative method approved by the APCO, ARB and EPA: Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
28. If vent gas composition is monitored with a continuous analyzer employing gas chromatography the minimum sampling frequency shall be one sample every 30 minutes. If vent gas composition is monitored using continuous analyzers not employing gas chromatography, the total reduced sulfur content of vent gas shall be determined by using EPA Method D4468-85. [District Rule]
29. Vent gas flow shall be determined using one or more of the following methods, or by any alternative method approved by the APCO, ARB, and EPA: 1) EPA Methods 1 and 2; 2) A verification method recommended by the manufacturer of the flow monitoring equipment installed; 3) Tracer gas dilution or velocity; or 4) Other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule]
30. The operator shall monitor vent gas composition using one of the following five methods as appropriate. If flares share a common header, a sample from the header will be deemed representative of vent gas composition for all flares served by the header. The operator shall provide the APCO with access to the monitoring system to collect vent gas samples to verify the analysis. 1) Sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15-minute period continuously exceeds 330 standard cubic feet per minute (SCFM), a sample shall be taken within 15 minutes. The sampling frequency thereafter shall be one sample every three hours and shall continue until the flow rate of vent gas flared in any consecutive 15-minute period is continuously 330 SCFM or less. In no case shall a sample be required more frequently than once every 3 hours. (b) Samples shall be analyzed using approved test methods; or 2) Integrated sampling that meets the following requirements: (a) If the flow rate of vent gas flared in any consecutive 15 minute period continuously exceeds 330 SCFM, integrated sampling shall begin within 15 minutes and shall continue until the flow rate of vent gas flared in any consecutive 15 minute period is continuously 330 SCFM or less. (b) Integrated sampling shall consist of a minimum of one aliquot for each 15-minute period until the sample container is full. If sampling is still required pursuant to part (a), a new sample container shall be placed in service within one hour after the previous sample was filled. A sample container shall not be used for a sampling period that exceeds 24 hours. (c) Samples shall be analyzed using approved test methods; or 3) Continuous analyzers that meet the following requirements: (a) The analyzers shall continuously monitor for total hydrocarbon methane, and depending upon the analytical method used pursuant to Section 6.3.4, hydrogen sulfide or total reduced sulfur. (b) The hydrocarbon analyzer shall have a full-scale range of 100% total hydrocarbon. (c) Each analyzer shall be maintained to be accurate to within 20% when compared to any field accuracy tests or to within 5% of full scale; or 4). Continuous analyzers employing gas chromatography that meet the following requirements: (a) The gas chromatography system shall monitor for total hydrocarbon, methane, and hydrogen sulfide. (b) The gas chromatography system shall be maintained to be accurate within 5% of full scale; or 5) Monitor sulfur content using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested using approved test methods. [District Rule 4311]
31. Permittee shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311]

32. The operator of a flare with a water seal shall monitor and record the water level and pressure of the water seal daily or as specified on the Permit to Operate. [District Rule 4311]
33. To show compliance with sulfur emission limits, the gas being flared shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for the flared gas, then the compliance testing frequency shall be semi-annually. If a semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. The sulfur content of the gas being flared shall be determined using ASTM D 1072-80, D 3031-81, D 4084-82, D 3246-81 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. The fuel higher heating value for the gases being flared shall be certified by third party fuel supplier or determined by ASTM D 1826-88 or D 1945-81 in conjunction with ASTM D 3588-89. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. Permittee shall keep accurate daily records of flare vent gas and pilot gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]
37. This flare shall not be used as a leak control device as described in Rule 4409, 5.3.5 (adopted April 20, 2005), nor as a control device for any permit unit subject to NSPS, without modification of permit requirements to address 40 CFR 60.18. [District Rule 2520, 9.4.3] Federally Enforceable Through Title V Permit
38. The permittee shall maintain records of the duration of flare operation, amount of gas flared, the nature of the emergency situation and any corrective action take to rectify the process upset or breakdown that necessitated the use of the flare. [District Rules 2520, 9.3.2 and 4311, 6.1] Federally Enforceable Through Title V Permit
39. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for the flare for inspection at any time for a period of five years. [District Rule 2520, 9.4.2 and District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
40. 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]