

August 22, 2023

Mr. Douglas Shaffer
California Resources Elk Hills LLC
900 Old River Road
Bakersfield, CA 93311

Re: Notice of Final Action - Significant Title V Permit Modification
Facility Number: S-2234
Project Number: S-1224723

Dear Mr. Shaffer:

The Air Pollution Control Officer has modified the Title V permit for California Resources Elk Hills LLC at NE 1/4 Sec. 35, T30S, R23E incorporating S-2234-251-0. California Resources Elk Hills, LLC proposes to install a 40 MMBtu/hr Crimson Energy CE-600 enclosed flare for VOC destruction.

Enclosed is the modified Title V permit. The application and proposal were sent to CARB and US EPA Region IX on July 7th, 2023. No comments were received following the District's preliminary decision on this project.

The notice of final decision has been posted on the District's website (www.valleyair.org).

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

Sincerely,



Brian Clements
Director of Permit Services

Enclosures

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

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



Facility # S-2234
CALIFORNIA RESOURCES ELK HILLS LLC
9600 MING AVE
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

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

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AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-251-0

ISSUANCE DATE: 08/22/2023

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES ELK HILLS LLC

MAILING ADDRESS:
9600 MING AVE
BAKERSFIELD, CA 93311

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

EQUIPMENT DESCRIPTION:

40 MMBTU/HR CRIMSON ENERGY CE-600 ENCLOSED GROUND-LEVEL FLARE SERVING GAS TREATMENT UNIT #2 (GTU-2)

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 NOX emission reduction credits for the following quantity of emissions: 1st quarter - 2,365 lb, 2nd quarter - 2,365 lb, 3rd quarter - 2,365 lb, and fourth quarter - 2,366 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. GC# 1983} ERC Certificate Number S-5153-2 (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

Steven Davidson

Brian Clements, Director of Permit Services

S-2234-251-0 : Aug 22 2023 4:42PM -- OBAA : Joint Inspection NOT Required

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 354 lb, 2nd quarter - 355 lb, 3rd quarter - 355 lb, and fourth quarter - 355 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]
6. ERC Certificate Number S-1717-1 (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]
7. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of emissions: 1st quarter - 374 lb, 2nd quarter - 375 lb, 3rd quarter - 375 lb, and fourth quarter -375 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]
8. ERC Certificate Number N-1387-5 (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]
9. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits as interpollutant offsets for PM10 emission reduction credits in the following quantity of emissions: 1st quarter - 1,051 lb, 2nd quarter - 1,051 lb, 3rd quarter - 1,051 lb, and fourth quarter - 1,052 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]
10. ERC Certificate Numbers N-1079-5, N-1118-5, N-1129-5, C-1333-5, and N-1387-5 (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]
11. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. No air contaminant shall be discharged into the atmosphere as a result of operation of the flare for a period or periods aggregating more than three minutes in any one hour which exceeds 5% opacity. [District Rules 2201 and 4102]
13. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
14. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
15. The flare outlet shall shall be equipped with an automatic ignition system, or, operate with a pilot flame present at all times when combustible gases are vented through the flare. The pilot need not be present when the flare is isolated for required flare maintenance. [District Rule 4311]
16. Unless the flare is equipped with a flow-sensing ignition system, the flare shall be equipped and operated with 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. [District Rule 4311]
17. The flare shall use purge gas, as defined by Rule 4311, for purging. [District Rule 4311]
18. The flare shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter or other District-approved alternative method to measure the amount of gas combusted in the flare. [District Rule 4311]
19. Flares that the operator can verify, based on permit conditions, that are not capable of producing reportable flaring events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311]
20. A Reportable Flaring Event is defined as any flaring where more than 500,000 standard cubic feet of vent gas is flared per calendar day, or where sulfur oxide emissions are greater than 500 pounds per calendar day. [District Rule 4311]

CONDITIONS CONTINUE ON NEXT PAGE

21. 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]
22. The Flare Minimization Plan (FMP) shall include, but is not limited to, the following: 1) A description and technical specifications for the flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems; 2) Detailed process flow diagrams of all upstream equipment and process units venting to the flare, identifying the type and location of all control equipment; 3) A description of equipment, processes, or procedures the operator plans to install or implement to eliminate or minimize flaring and planned date of installation or implementation; 4) An evaluation of prevention measures to reduce flaring that has occurred or may be expected to occur during planned major maintenance activities, including startup and shutdown; 5) An evaluation of preventative measures to reduce flaring that may be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of the flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall determine the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means; 6) An evaluation of preventative measures to reduce flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall determine the adequacy of existing maintenance schedules and protocols for such equipment. A failure is recurrent if it occurs more than twice during any 5-year period as a result of the same cause as identified in accordance with Section 6.2.2; 7) Any other information requested by the APCO as necessary for determination of compliance with applicable provisions of this rule. [District Rule 4311]
23. Every five years after the initial Flare Minimization Plan (FMP) submittal, the operator shall submit an updated FMP for the flare to the APCO for approval. The current FMP shall remain in effect until the updated FMP is approved by the APCO. If the operator fails to submit an updated FMP, the existing FMP shall no longer be considered an approved plan. [District Rule]
24. An updated FMP shall be submitted by the operator addressing new or modified equipment, prior to installing the equipment only if: 1) The equipment change would require an Authority To Construct (ATC) and would impact the emissions for the flare; 2) The ATC is deemed complete after June 18, 2009; 3) The modification is not solely the removal or decommissioning of equipment that is listed in the FMP and has no associated increase in flare emissions. [District Rule]
25. When submitting the initial FMP, or updated FMP, the operator shall designate as confidential any information claimed to be exempt from public disclosure under the California Public Records Act, Government Code Section 6250 et seq. and provide a justification for this designation and also submit a separate copy of the document with the information designated confidential redacted. [District Rule]
26. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311]
27. The operator shall submit an annual report to the APCO that summarizes all Reportable Flaring Events that occurred during the previous 12-month period. Beginning January 1, 2024, the report shall be submitted within 30 days following the end of the previous calendar year. The report shall include: 1) the results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time and duration of the flaring event. [District Rule 4311]

28. Until January 1, 2024, the operator shall submit an annual monitoring report to the APCO within 30 days following the end of each 12-month period. On and after January 1, 2024, and annually thereafter, the operator shall submit the annual monitoring report in an electronic format approved by the District to the APCO within 30 days following the end of each calendar year, which will include: 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 pursuant to Section 6.6; 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.14, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, 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 pursuant to Section 5.13 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 flow; 6) Flare monitoring system downtime periods, including dates and times; 7) For each day and for each month provide calculated sulfur dioxide emissions; 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule]
29. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
30. Emission rates from this the flare shall not exceed any of the following limits: NO_x - 0.018 lb/MMbtu; CO - 0.008 lb/MMbtu; PM₁₀ - 0.008 lb/MMBtu; or SO_x (as SO₂) - 0.0018 lb/MMBtu, VOC - 0.0027 lb/MMbtu. [District Rule 2201]
31. Total sulfur concentration of gas introduced to the flare shall not exceed 1.0 gr-S/100 scf. [District Rules 2201 and 4801]
32. The sulfur content of the gas combusted shall be determined using EPA Method 11 or EPA Method 15, or ASTM Method D1072, D4084, or D5504, or an alternative method approved by the District [District Rule 2201]
33. Source testing to measure NO_x, CO, and VOC emissions shall be conducted within 60 days of initial start-up. [District Rule 2201]
34. Source testing to measure NO_x and VOC emissions shall be conducted at least once every twelve (12) months. [District Rule 2201 and 4311]
35. Source testing to measure CO emissions shall be conducted at least once every twelve (12) months. [District Rule 2201]
36. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
37. The results of each source test shall be submitted to the District within 60 days after completion of the source test. [District Rule 1081 and 4311]
38. NO_x emissions for source test purposes shall be determined using EPA Method 19, EPA Method 7E, or ARB Method 100. [District Rules 1081, 2201, and 4311]
39. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 1081 and 2201]
40. VOC emissions for source test purposes shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 "Determination of Volatile organic Compounds in Emission from Stationary Sources" shall be determined by EPA Method 18, EPA Method 25, or EPA Method 25A. [District Rule 1081, 2201, and 4311]
41. Stack gas oxygen (O₂) shall be determined using EPA Method 3A, EPA Method 7E, or ARB Method 100. [District Rule 1081, 2201, and 4311]
42. For source test purposes stack gas velocity/volumetric flowrate shall be determined using EPA Method 2 or EPA Method 19, and stack gas moisture content shall be determined using EPA Method 4. [District Rule 1081 and 2201]
43. All source test emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 1081 and 2201]

CONDITIONS CONTINUE ON NEXT PAGE

44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081 and 2201]
45. The permittee shall determine and record the sulfur content of the gas combusted in the flare at least annually and whenever there is a change in the source of the gas. [District Rule 2201]
46. The sulfur content of the gas combusted shall be determined using EPA Method 11 or EPA Method 15, or ASTM Method D1072, D4084, or D5504, or an alternative method approved by the District. [District Rule 2201]
47. The permittee shall determine and record the higher heating value (HHV) of the gas combusted in the flare at least annually and whenever there is a change in the source of the gas. [District Rule 2201]
48. The Higher Heating Value (HHV) of the gas combusted shall be determined using ASTM D1826, ASTM 1945 in conjunction with ASTM D3588, or an alternative method approved by the District. [District Rule 2201]
49. Permittee shall maintain daily and annual records of the quantity of gas combusted in the flare in standard cubic feet (scf) and the total heating value of the gas combusted in MMBtu. [District Rule 1070, 2201, and 4311]
50. The total heating value of the gas combusted shall be calculated using the quantity of gas combusted and the most recent determination of the Higher Heating Value (HHV) of the gas as required by this permit. [District Rule 2201]
51. Records of the sulfur content and the Higher Heating Value (HHV) in Btu/scf of the gas combusted shall be maintained. [District Rule 1070 and 2201]
52. Permittee shall maintain copies of the source testing result conducted pursuant to Section 6.4.2, a copy of the approved flare minimization plan pursuant to Section 6.5, a copy of annual reports submitted to the APCO pursuant to Section 6.2 and monitoring data collected by the vent gas flow measuring device pursuant to Sections 5.13. [District Rule 4311]
53. All records shall be maintained and retained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070, 2201, and 4311]