



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 16 2014

Mr. Raymond Rodriguez
Occidental of Elk Hills Inc
PO Box 1001
Tupman, CA 93276

**Re: Notice of Preliminary Decision – ATC / Certificate of Conformity
District Facility # S-2234
Project # 1143664**

Dear Mr. Rodriguez:

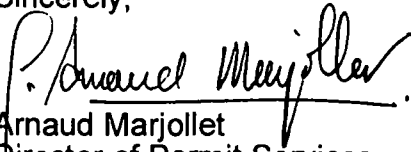
Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes modifications to a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

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

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

Thank you for your cooperation in this matter.

Sincerely,


Arnaud Marjollet
Director of Permit Services

AM:RE/st

Enclosures

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

Sayed Sadredin
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Lower Maximum Heat Input Rating of Hot Oil Heater

Facility Name: Occidental of Elk Hills Inc
Mailing Address: PO Box 1001
Tupman, CA 93276

Date: December 9, 2014
Engineer: Richard Edgehill
Lead Engineer: Richard Karrs

Contact Person: Raymond Rodriquez
Telephone: (661) 763-6159
Fax: (661) 204-9236
E-Mail: raymond_rodriquez@oxy.com

Application #: S-2234-230-1

Project #: S-1143664

Deemed Complete:

I. Proposal

Occidental of Elk Hills Inc (OEHI) operates a gas processing plant with cryogenic operations and a hot oil heating system including a 206.7 MMBtu/hr hot oil heater. Applicant has requested an Authority to Construct (ATC) to replace the existing burners and lower the heat input rating of the hot oil heater to 164 MMBtu/hr. The CO limit will be increased from 50 ppmv @ 3% O₂ to 100 ppmv @ 3% O₂. No other changes are proposed.

The project results in an increase in CO emissions triggering BACT. Offsets and public notice are not required.

Disposition of Outstanding ATCs

ATC for S-2234-230-2, which authorized lowering the heat input rating with no change in CO limit (50 ppmv @ 3%O₂) will not serve as the base document for the proposed ATC.

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

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99) – exempt – there is no emissions increase and therefore the project is not a NSPS Modification

Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)) –
exempt – facility is not a major HAPs source
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III (3/17/05)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators,
and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA
Guidelines

III. Project Location

The natural gas processing plant is located at the 35R Gas Processing Stationary Source NW Section 35, T30S, R23E. The facility is not located near residential areas, sensitive receptors or within 1000 feet of any school.

IV. Process Description

The Hot Oil Heater (HOH) is located at a cryogenic gas plant that includes a variety of equipment required for compressing, treating and dehydrating rich wet field gas; equipment required for processing and extracting natural gas liquids (NGL) and recovering liquefied petroleum gas products (propane, butane); and utility systems required for supporting the various process units that comprise the gas plant.

The dry, sweet residue gas from the facility is delivered to existing pipelines for use as fuel or for custody transfer. Natural gas liquids recovered by the cryogenic process are separated into four streams: ethane (C_2H_6); propane (C_3H_8), butane (C_4H_{10}) and natural gasoline (pentane+). Ethane is combined with overhead gas from the treating systems and is compressed, dehydrated and re-injected. The propane, butane and natural gasoline proceeds to custody transfer via product pipeline systems.

The natural gas fired HOH, the subject of this project, is part of a hot oil system that is used to provide heat to various process equipment at the facility.

Proposed Modification

In this project the heat input rating of the HOH will be lowered to 164 MMBtu/hr. The change will be accomplished by replacing the existing burners with new burners having a heat input (nameplate) rating of 164 MMBtu/hr. The reduction in heat input results in a reduction in emissions of all criteria pollutant with the exception of the CO, which is expected to increase. The lower heat rating of the burner will result in a less complete combustion of the fuel gas.

This less complete combustion results in higher concentrations of CO in the burner exhaust. With this increase in CO emission, the de-rated burner is not expected to continuously comply with the existing CO permit limit of 50 ppmv. A revised CO permit limit of 100 ppmv, based on the operating characteristics of the de-rated burner, is being requested in the project.

V. Equipment Listing

Pre-Project Equipment Description:

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

Proposed Modification:

S-2234-230-1: MODIFICATION OF HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA-LOW NOX BURNER: REPLACE EXISTING BURNERS WITH JOHN ZINK CRMB ULTRA-LOW NOX BURNERS (OR EQUIVALENT), DECREASE HEAT INPUT RATING FROM 206.7 MMBTU/HR TO 164 MMBTU/HR, INCREASE CO LIMIT FROM 50 PPMV to 100 PPMV

Post Project Equipment Description:

S-2234-230-1: HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 164 MMBTU/HR HOT OIL HEATER WITH JOHN ZINK CRMB ULTRA-LOW NOX BURNERS

As per District policy 1035 Flexibility in Equipment Descriptions in ATCs, some flexibility in the final specifications of the equipment will be allowed stated in the following ATC conditions for the O2 heater and Hot Oil Heater (S-2234-218 and '-230 respectively).

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

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

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

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

VI. Emission Control Technology Evaluation

The hot oil heater is equipped with ultra-low NO_x burners. The replacement burners will have a similar design and performance.

VII. General Calculations

A. Assumptions

- Facility operates 24 hr/day 365 days per year.
- Fugitive emissions 0.2 lb/day (73 lb/yr) – current PTO

B. Emission Factors

Hot Oil Heater S-2234-230-0

Pollutant	Emission Factors		Source
NO _x	0.0062 lb-NO _x /MMBtu	5 ppmvd NO _x (@ 3%O ₂)	Current PTO
SO _x	0.00269 lb-SO _x /MMBtu*		"
PM ₁₀	0.0076 lb-PM ₁₀ /MMBtu	7.6 lb/10 ⁶ scf	"
CO	0.037 lb-CO/MMBtu	50 ppmv CO (@ 3%O ₂)	" proposed
	0.074 lb-CO/MMBtu	100 ppmv CO (@ 3%O ₂)	
VOC	0.0055 lb-VOC/MMBtu	13 ppmv @3% O ₂	"

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Hot Oil Heater S-2234-230-0

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_x	0.006	206.7	24	30.8
SO_x	0.00269	206.7	24	13.3
PM₁₀	0.0076	206.7	24	37.7
CO	0.037	206.7	24	183.5
VOC	0.0055	206.7	24	27.3

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_x	0.006	206.7	8,760	11,226
SO_x	0.00269	206.7	8,760	4,871
PM₁₀	0.0076	206.7	8,760	13,761
CO	0.037	206.7	8,760	66,996
VOC	0.0055	206.7	8,760	9,959

VOC: $27.3 + 0.2 = 27.5$ lb/day ($9959 + 73 = 10,032$ lb/yr)

2. Post Project Potential to Emit (PE2)

Hot Oil Heater S-2234-230-1

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.0062	164	24	23.6
SO _x	0.00269	164	24	10.6
PM ₁₀	0.0076	164	24	29.9
CO	0.074	164	24	291.3
VOC	0.0055	164	24	21.6

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.006	164	8,760	8,907
SO _x	0.00269	164	8,760	3,865
PM ₁₀	0.0076	164	8,760	10,918
CO	0.074	164	8,760	106,311
VOC	0.0055	164	8,760	7,902

VOC: $21.6 + 0.2 = 21.8$ lb/day ($7902 + 73 = 7,975$ lb/yr)

Emissions profiles are included in **Attachment II**.

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

SSPE1 (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE Calculator for project 1143911*	1,372,643	88,502	228,563	7,192,958	3,363,974
'-171 (GDS)	0	0	0	0	142
'-173 ICE	162		5	86	13
'-187 ICE	1,795	242	514	12,208	3,285
'-218 O2 HTR	1,196	460	1,298	6,230	1,033
SSPE1*	1,375,796	89,204	230,380	7,211,482	3,368,447

*ATCs listed included all those with emissions changes, GDS is Glycol Dehydration System, ICE IC engine, HTR heater

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	1,375,796	89,204	230,380	7,211,482	3,368,447
S-2234-230-0	-11,226	-4,871	-13,761	-66,996	-10,032
S-2234-230-2	8,907	3,865	10,918	106,311	7,975
SSPE2	1,373,477	88,198	227,537	7,250,797	3,366,390

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	1,375,796	89,204	230,380	230,380	7,211,482	3,368,447
SSPE2	1,373,477	88,198	227,537	227,537	7,250,797	3,366,390
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	Yes	No	Yes	Yes	Yes	Yes

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for NO_x, PM10, CO, and VOC emissions and will remain a Major Source for these are contaminants. The source is Non Major for SO_x.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	687	1,684	45	3,605	115	115
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y	Y	N	Y	N	N

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

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

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

Clean Emissions Unit, located at a Major Source

The hot oil heater satisfied BACT Guideline 1.2.1 and the Rule 4320 limit for NO_x which were BACT at the time of installation (< 5 years ago). Therefore, the unit is a Clean Emissions Unit.

Therefore BE=PE1.

As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

BE (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
S-2234-230	11,226	4,871	13,761	13,761	66,996	10,032

7. SB 288 Major Modification

Since this facility is a major source for NO_x, PM₁₀, and VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required. The Source is Non Major for SO_x and therefore the project is not a SB288 Major Modification for SO_x.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	8,907	50,000	No
SO _x	NA	80,000	No
PM ₁₀	10,918	30,000	No
VOC	7,902*	50,000	No

*does not include fugitive emissions

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

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

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

The source is non-major for SO_x and therefore the project is not a Federal Major Modification for SO_x.

Step 1

For existing emissions units, the increase in emissions is calculated as follows.

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

UBC: Since this project does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

PAE was not provided by the applicant and therefore is assumed to be PE2.
UBC = PE2 – BAE i.e. during the baseline period the unit could have emitted PE2 since PE2 < PE1.

Therefore,

$$\begin{aligned}\text{Emission Increase} &= \text{PAE} - \text{BAE} - \text{UBC} \\ &= \text{PE2} - \text{BAE} - (\text{PE2} - \text{BAE}) \\ &= 0\end{aligned}$$

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	NA	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and no further analysis is required.

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

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

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

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO ₂	SO ₂	CO	PM	PM ₁₀
Total PE from New and Modified Units	4.5	1.9	53.1	5.3	5.3
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

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

Quarterly NEC [QNEC]			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO_x	8,907	11,226	-580
SO_x	3,865	4,871	-257
PM₁₀	10,918	13,761	-711
CO	106,311	66,996	9,829
VOC	7,975	10,032	-514

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

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

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

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

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

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

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

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

There are no changes to emissions factors and therefore EF2 = EF1 and AIPE = PE2 – PE1. AIPE are listed in the following table

AIPE			
	PE2 (lb/day)	PE1 (lb/day)	AIPE (lb/day)
NO _x	24.4	30.8	-6.4
SO _x	10.6	13.3	-2.7
PM ₁₀	29.9	37.7	-7.8
CO	291.3	183.5	107.8
VOC	21.6	27.3	-5.7

As demonstrated above, the AIPE is greater than 2.0 lb/day for CO. Therefore BACT is triggered.

d. SB 288/Federal Major Modification

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

2. BACT Guideline

In the original ATC application, a CO limit of 120 ppm (at 3% O₂) was proposed as BACT. However the District determined that the 50 ppm limit was technically feasible through technology transfer from an oil field steam generator.

The unit has achieved the CO limit at high input rates (e.g. 80% load or greater). However, derating of the unit will result in a lower flame temperature and it will not be technologically feasible to achieve a 50 ppmv limit. Consequently, as discussed previously, OEHI is proposing a 100 ppmv limit as BACT for CO for this unit.

Due to the reduction of the heat rating of the HOH burner and the increase in the CO emission as a result of that change, a project-specific CO BACT determination will be made (**Attachment III**) for this emissions-unit.

3. Top-Down BACT Analysis

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

Pursuant to the attached Top-Down BACT Analysis (see **Attachment III**), BACT has been satisfied with the following:

CO: 100 ppmv @ 3% O₂, 0.074 lb/MMBtu

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	1,373,477	88,198	227,537	7,250,797	3,366,390
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	Yes	Yes	Yes	Yes	Yes

2. Quantity of Offsets Required

The quantity of offsets for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,

BE = HAE

There is a reduction in permitted emissions and PE = PE1 for NO_x, SO_x, PM₁₀, CO, and VOCs. Therefore offsets cannot be required for the project.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

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

b. PE > 100 lb/day

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

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	1,375,796	1,373,477	20,000 lb/year	No
SO _x	89,204	88,198	54,750 lb/year	No
PM ₁₀	230,380	227,537	29,200 lb/year	No
CO	7,211,482	7,250,797	200,000 lb/year	No
VOC	3,368,447	3,366,390	20,000 lb/year	No

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

d. SSPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	1,373,477	1,375,796	-2,319	20,000 lb/year	No
SO _x	88,198	89,204	-1,006	20,000 lb/year	No
PM ₁₀	227,537	230,380	-2,843	20,000 lb/year	No
CO	7,250,797	7,211,482	39,315	20,000 lb/year	Yes
VOC	3,366,390	3,368,447	-2,057	20,000 lb/year	No

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

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does not constitute a Title V significant modification. Therefore, public noticing for Title V significant modifications is not required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_x emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT. There is no change to the current DEL conditions which follow.

Proposed Rule 2201 (DEL) Conditions:

VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Y

Hot oil heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Y

Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Y

E. Compliance Assurance

1. Source Testing

Startup source testing for NO_x, CO, and O₂ will be required. Additional source test requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

2. Monitoring

As required by *District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

As required by *District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*, this unit is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Attachment IV** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

As discussed above, this facility is a major source. Pursuant to Rule 2520 and as required by permit condition, the facility will have up to 12 months from the date of ATC issuance to either submit a Title V Application or comply with District Rule 2530 *Federally Enforceable Potential to Emit*.

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

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

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

Rule 4101 Visible Emissions

The hot oil heater is currently operating in compliance with the rule and continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As demonstrated above, there are no increases in emissions (other than CO) associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 Particulate Matter Concentration

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

The project is not expected to affect compliance with the rule.

The hot oil heater is currently operating in compliance with the rule and continued compliance is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 µm in diameter.

The project is not expected to affect compliance with the rule.

The hot oil heater is currently operating in compliance with the rule and continued compliance is expected.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

The subject unit(s) is subject to Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit(s) is also subject to District Rule 4320.

Since emissions limits of Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305.

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

The unit is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

Therefore, compliance with District Rule 4306 requirements is expected and no further discussion is required.

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

The project is not expected to affect compliance with the rule.

The hot oil heater is currently operating in compliance with the rule and continued compliance is expected.

Rule 4801 Sulfur Compounds

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

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;

- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

District is a Lead Agency & Facility is Subject to Cap-and-Trade

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

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

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

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

Industries covered by Cap-and-Trade are identified in the regulation under section 95811, Covered Entities:

1. Group 1: Large industrial facilities

These types of facilities are subject to Cap and Trade, and the specific companies covered are listed at <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>, Section 95811 (a), under the "Publically Available Market Information" section (list maintained by the California Air Resources Board).

2. Group 2: Electricity generation facilities located in California, or electricity importers

These types of facilities are subject to Cap and Trade (section 95811, b).

3. Group 3: Suppliers of Natural Gas, Suppliers of Reformulated Gasoline Blendstock for Oxygenate Blending and Distillate Fuel Oil, Suppliers of Liquefied Petroleum Gas, and Suppliers of Blended Fuels

These entities are subject to Cap and Trade compliance obligations which must cover all fuels (except jet fuels) identified in section 95811 (c) through (f) of the Cap-and-Trade regulation delivered to end users in California, less the fuel delivered to covered entities (group 1 above).

This facility is subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-2234-230-1 subject to the permit conditions on the attached draft ATC in **Attachment VI**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-2234-230-1	3020-02-H	164,000 Btu/hr boiler	\$1030.00

Attachments

- I: Current PTO
- II: Emissions Profiles
- III: BACT Analysis
- IV: AAQA
- V: Title V Compliance Certification Form
- VI: Draft ATC

ATTACHMENT I
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-230-0

EXPIRATION DATE: 10/31/2016

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

EQUIPMENT DESCRIPTION:

HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA-LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. BACT Requirement Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4409. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Hot oil heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409] Federally Enforceable Through Title V Permit
22. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT II

Emissions Profiles

Permit #: S-2234-230-1	Last Updated
Facility: OCCIDENTAL OF ELK HILLS INC	11/15/2014 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	8907.0	3865.0	10918.0	106311.0	7975.0
Daily Emis. Limit (lb/Day)	24.4	10.6	29.9	291.3	21.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-579.0	-251.0	-710.0	9828.0	-514.0
Q2:	-580.0	-251.0	-711.0	9829.0	-514.0
Q3:	-580.0	-252.0	-711.0	9829.0	-514.0
Q4:	-580.0	-252.0	-711.0	9829.0	-515.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT III BACT Analysis

Due to the unique nature of this proposal, there is no current BACT Guideline for this class/category of source. Therefore a project specific BACT analysis will be performed. A discussion of the proposal details and results of a search for technology transfer from existing BACT databases follows.

1. Justification of CO Limit Increase

One of the objectives of Project S-1143664 is to reduce the heat input rating of the Hot Oil Heater (HOH) burner from 206.7 MMBtu/hr to 164 MMBtu/hr. In doing so, all criteria pollutant potential emissions will be reduced with the exception of the CO, which will increase. The lower heat rating of the burner will result in a less complete combustion of the fuel gas. This less complete combustion results in higher concentrations of CO in the burner exhaust. With this increase in CO emission, the de-rated burner is not expected to continuously comply with the existing CO permit limit of 50 ppmv. A revised CO permit limit of 100 ppmv, based on the operating characteristics of the de-rated burner, is being requested in the project.

2. Evaluation of CO Emission Levels - Achieved-In-Practice BACT

Applicant conducted a search and evaluation of CO emissions levels that have been achieved-in-practice for other equipment in the same class and category of source (Response to Incompleteness letter dated October 24, 2014). The search for similar equipment found that there are not many emission units of the same class and category as the subject HOH. The HOH is not located at a refinery and is not considered refinery equipment. The HOH is used for natural gas processing and falls within SIC Code 1321 (Natural Gas Liquids) and NAICS Code 211112 (Natural Gas Liquid Extraction). Consequently, searches also included emission units of similar class and category.

Various air district BACT databases were searched, including the South Coast AQMD (SCAQMD), Bay Area AQMD (BAAQMD), Sacramento Metropolitan AQMD (SMAQMD), California Air Resources Board (CARB) and U.S. Environmental Protection Agency (USEPA). Except for USEPA, no source category matches with CO emissions were found for qualification as achieved-in-practice.

USEPA:

One BACT determination was found in the EPA's database under process category "Hot Oil Heater". The BACT determination was based on a natural gas fired hot oil heater with a heat input rating of 84 MMBtu/hr, approximately one-half the rating of the subject HOH to be modified by this project.

In the District BACT Guideline, one of the requirements to be met for the achieved in practice BACT determination is that units must be of a similar size. The EPA determination is for an emission unit with a rating of about half the rating of the

modified unit. Consequently, the EPA determination is not an Achieved-in-Practice BACT for the de-rated unit.

Note that applicant did provide, an excerpt from a confidential report prepared by Coen, the burner manufacturer, in which they conclude that the 5 ppmv NO_x limit and 50 ppmv CO limit cannot be achieved when operating at less than 25% load.

Technologically Feasible Option

Oxidizing catalyst for reducing CO emissions

BACT Analysis for CO Emissions:

Carbon monoxide (CO) emissions are generated from the incomplete combustion of air and fuel.

a. Step 1 - Identify all control technologies

- 1) 100 ppmvd CO @ 3% O₂ – Achieved-in-Practice
- 2) Oxidation Catalyst (50 ppmvd @ 3% O₂ CO) – Technologically Feasible

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

- 1) Oxidation Catalyst (50 ppmvd CO @ 3% O₂) – Technologically Feasible
- 2) 100 ppmvd CO @ 3% O₂ – Achieved-in-Practice

d. Step 4 - Cost Effectiveness Analysis

A cost effective analysis, as described in Section 10 of the SJVAPCD *Best Available Control Technology (BACT) Policy APR 1305*, has been completed based on an oxidizing catalyst system for the reduction of CO emission to 50 ppmv (the current permit limit) from 100 ppmv. Advanced Combustion & Process Controls, Inc. of Bakersfield, CA, provided the cost of the oxidizing catalyst, equipment installation and equipment operation.

The analysis uses a Capitol Recovery Factor of 0.1623 derived from the formula in Section 10 of the SJVAPCD's *Best Available Control Technology (BACT) Policy APR 1305* combined with the cost information below.

Installation Cost (excluding gas plant changes as needed): \$1,200,000

Equivalent Annual Control Equipment Cost calculation per APCD Policy APR 1305-9 Section X(A)(1). Assume $i = 10\%$ and $n = 10$ years.

$$A = P * ((i * (1 + i)^n) / ((1 + i)^n - 1))$$

$$A = \$1,200,000 * ((.10*(1 + .10)^{10}) / ((1 + .10)^{10} - 1))$$
$$A = \$195,240$$

$$164 \text{ MMBtu/hr} \times (0.074 \text{ lb/MMBtu} - 0.037 \text{ lb/MMBtu}) \times 8760 \text{ hr/yr} / 2000 \text{ lb/ton}$$
$$= 26.6 \text{ tons}$$

$$\text{Control Cost (\$/ton), } \$195,240 / 26.6 = \$7,340/\text{ton}$$

The cost effective analysis of the reduction of CO emission from 100 ppmv to 50 ppmv results in a control cost of \$7,340/ton, which exceeds the cost effective threshold of \$300/ton. Consequently, the oxidizing catalyst system is not a cost effective BACT solution.

e. Step 5 - Select BACT

BACT for CO emissions from this de-rated hot oil heater is a CO limit of 100 ppmvd @ 3% O₂. The applicant has proposed to this limit for the derated hot oil heater; therefore BACT for CO emissions is satisfied.

ATTACHMENT IV
AAQA

San Joaquin Valley Air Pollution Control District

Risk Management Review

To: Richard Edgehill AQE – Permit Services
From: Esteban Gutierrez AQS – Technical Services
Date: November 17, 2014
Facility Name: Occidental of Elk Hills
Location: NW Section 35, T30S, R23E
Application #(s): S-2234-230-1
Project #: S-1143664

A. RMR SUMMARY

RMR Summary			
Categories	Type of Unit (Unit 230)	Project Totals	Facility Totals
Prioritization Score	NA ¹	NA ¹	>1
Acute Hazard Index	NA ¹	NA ¹	0.09
Chronic Hazard Index	NA ¹	NA ¹	0.03
Maximum Individual Cancer Risk (10 ⁻⁶)	NA ¹	NA ¹	2.36E-6
T-BACT Required?	NA		
Special Permit Conditions?	NA		

¹Acute and Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since the only an AAQA was requested by the processing engineer.

B. RMR REPORT

I. Project Description

Technical Services received a request on November 14, 2014, to perform an Ambient Air Quality Analysis for the modification of an existing hot oil heater..

II. Analysis

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 291.3 lb/day CO, 23.6 lb/day NO_x, 10.6 lb/day SO_x, and 29.9 lb/day PM₁₀.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

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

III. Conclusion

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Facility Summary



HRA/RMR REQUEST Form

Please send this request to: HRAModeler@valleyair.org

Facility Name:	Occidental of Elk Hills Inc	Processing Engineer: Richard Edgehill
Mailing Address:	PO Box 1001 Tupman, CA 93276	Tec Svces Processing Staff:
Location:	35R Gas Processing Stationary Source NW Section 35, T30S, R23E	Tec Svces Reviewer:
Contact Name:	Raymond Rodriguez	
Telephone:	763-6159	
Application #:	S-2234-230-1	Completed Date:
Project #:	1143664	

Information Required

Please check which information is provided to Tec. Services:

Information ALWAYS Required

- ☐ Receptor Distances
☒ Process Rates (hour & annual)
☒ Emission Rates (hour & annual)
☐ Hours of Operation
 Life of Project:

Additional Info Required Based on the Source Category

Oil Facilities / Glass Plant/ Power Plant

Plasma Cutting / Soil Remediation / Concrete Batch

- ☒ Stack Velocity
☒ Stack Height
☒ Stack temperature
☐ MSDS
☐ Other (for area sources)

Source of Information

Please check which form is attached to this HRA request (it can be a combination of any of the following):

- ☒ Supplemental Application Form
☐ HRA Request - Project Information Form
☐ Information supplied by the applicant (attached)

Notification Requirement

- | | | | |
|----------------------------------------------|---------------------|------------------------------------------|------------------------------|
| Is it obvious that notification is required? | NSR (Public Notice) | Yes: <input checked="" type="checkbox"/> | No: <input type="checkbox"/> |
| | COC (EPA Notice) | Yes: <input type="checkbox"/> | No: <input type="checkbox"/> |
| | School Notice | Yes: <input type="checkbox"/> | No: <input type="checkbox"/> |

Please note that in case notification is required, please provide distance to fence line in all four directions

Prevention of Significant Deterioration (PSD)

AQE:

1. Based on the prelim review, is the Project subject to PSD for other pollutant than GHG? Yes: ☐ No: ☒
 2. Is the facility a PSD Major Source located within 10 km of a Class I area? Yes: ☐ No: ☒

If either "Yes" box is checked, please provide all modeling and impact analyses submitted by the applicant to Technical Services. In this case, the project cannot be deemed complete until Technical Services indicates it is complete.

Tec Svces:

PSD Major Source located within 10 km of a Class I area AND project impact $\geq 1 \mu\text{g}/\text{m}^3$? Yes: ☐ No: ☐

Supervisor Review: Application Complete for PSD Modeling ☐ Date Returned to AQE: _____

Reimbursable Overtime

Has the applicant requested reimbursable overtime processing?
If YES, please send HRA request to Tech Services before deeming complete

Yes: ☒ No: ☐

Supervisor's signature: _____

Comments and References:

AAQA modelling only is required, project is RO

North Boundary: 3.25 miles

South Boundary: 3.7 miles

East Boundary: 7.2 miles

West Boundary: 3.3 miles

HRA/RMR REQUEST PROJECT INFORMATION Form

I. **Project Description:** Occidental of Elk Hills Inc (OEHI) operates a gas processing plant with cryogenic operations and a hot oil heating system including a 206.7 MMBtu/hr hot oil heater. Applicant has requested an Authority to Construct (ATC) to replace the existing burners and lower the heat input rating of the hot oil heater 164 MMBtu/hr. The CO limit will be increased from 50 ppmv @ 3% O₂ to 100 ppmv @ 3% O₂. No other changes are proposed.

II Receptor Location(s)

Receptor Description	Distance From Source
Residence	
Business	

III. Process Rate to be Modeled

Process Description	Process Rates	
	Hourly Rate	Annual Rate
hot oil heater		

IV. Emission Rate Or Substances to be Modeled

Process Description	Emission Rates	
	Hourly Rate	Annual Rate
combustion emissions, CO emissions only increase	see	below

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Hot Oil Heater S-2234-230-0

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_x	0.006	206.7	24	30.8
SO_x	0.00269	206.7	24	13.3
PM₁₀	0.0076	206.7	24	37.7
CO	0.037	206.7	24	183.5
VOC	0.0055	206.7	24	27.3

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_x	0.006	206.7	8,760	11,226
SO_x	0.00269	206.7	8,760	4,871
PM₁₀	0.0076	206.7	8,760	13,761
CO	0.037	206.7	8,760	66,996
VOC	0.0055	206.7	8,760	9,959

VOC: $27.3 + 0.2 = 27.5$ lb/day ($9959 + 73 = 10,032$ lb/yr)

2. Post Project Potential to Emit (PE2)

Hot Oil Heater S-2234-230-1

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_x	0.0062	164	24	23.6
SO_x	0.00269	164	24	10.6
PM₁₀	0.0076	164	24	29.9
CO	0.074	164	24	291.3
VOC	0.0055	164	24	21.6

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_x	0.006	164	8,760	8,907
SO_x	0.00269	164	8,760	3,865
PM₁₀	0.0076	164	8,760	10,918
CO	0.074	164	8,760	106,311
VOC	0.0055	164	8,760	7,902

VOC: $21.6 + 0.2 = 21.8$ lb/day ($7902 + 73 = 7,975$ lb/yr)

V. Project Location (*Select One*)

- ☐ Urban – Area of dense population
☒ Rural – Area of sparse population

VI. Point Sources

Stack Parameters:

Stack Height (Units)	Rain Cap or Pressure Plate	Inside Diameter (Units)	Gas Exit Velocity (Units)	Exhaust Discharge Direction	Gas Exit Temperature (Units)
100 ft	No	100 inches	37,801 acfm	vertical	250 deg F

AAQA for Occidental of Elk hills (S2234(1143664))

All Values are in Micrograms per Cubic Meter

	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
STCK1	4.9E-01	5.6E-03	6.0E+00	1.3E+00	2.2E-01	8.5E-02	2.1E-02	2.4E-03	5.99E-02	6.81E-03
Background	9.9E+01	2.7E+01	4.1E+03	2.6E+03	2.4E+01	2.4E+01	5.3E+00	2.4E+01	2.56E+02	6.50E+01
Facility Totals	100.0	26.8	4,083.5	2,564.3	24.2	24.1	5.4	24.0	256.1	65.0
AAQS	188.7	56.0	23,000.0	10,000.0	195.0	1,300.0	105.0	80.0	50.0	30.0
	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail

EPA's Significance Level (ug/m^3)

NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
0.0	1.0	2000.0	500.0	0.0	25.0	5.0	1.0	5.0	1.0

AAQA Emission (g/sec)

<i>Device</i>	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
STCK1	1.24E-01	1.28E-01	1.53E+00	1.53E+00	5.56E-02	5.56E-02	5.56E-02	5.56E-02	1.57E-01	1.57E-01

ATTACHMENT V
Title V Compliance Certification Form

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ SIGNIFICANT PERMIT MODIFICATION
☒ MINOR PERMIT MODIFICATION

☐ ADMINISTRATIVE
AMENDMENT

COMPANY NAME: OCCIDENTAL OF ELK HILLS, INC.		FACILITY ID: S - 2234
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility		
2. Owner's Name: OCCIDENTAL OF ELK HILLS, INC.		
3. Agent to the Owner: OCCIDENTAL OF ELK HILLS, INC.		

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

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

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

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

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

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



Signature of Responsible Official

11/25/14

Date

George Gough

Name of Responsible Official (please print)

HSE Manager

Title of Responsible Official (please print)

Mailing Address: Central Regional Office • 1990 E. Gettysburg Avenue • Fresno, California 93726-0244 • (559) 230-5900 • FAX (559) 230-6061

TVFORM-009
Rev. July 2011

ATTACHMENT VI
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-2234-230-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: OCCIDENTAL OF ELK HILLS INC
MAILING ADDRESS: ATTN: DENNIS CHAMPION
PO BOX 1001
TUPMAN, CA 93276

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

SECTION: NW35 TOWNSHIP: 30S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF HOT OIL SYSTEM WITH HOT OIL EXPANSION TANK, HOT OIL PUMPS, AND 206.7 MMBTU/HR HOT OIL HEATER WITH COEN C-RMB RAPID MIX ULTRA-LOW NOX BURNER: REPLACE EXISTING BURNERS WITH JOHN ZINK C-RMB ULTRA-LOW NOX BURNERS (OR EQUIVALENT), DECREASE HEAT INPUT RATING FROM 206.7 MMBTU/HR TO 164 MMBTU/HR AND RAISE CO LIMIT FROM 50 PPMV TO 100 PPMV @ 3% O₂

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

Arnaud Marjolle, Director of Permit Services

S-2234-230-1 : Nov 25 2014 1:06PM - EDGEHILL : Joint Inspection NOT Required

5. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using (ALR) equations for a 2,000 ppmv leak threshold included in EPA, "Protocol for Estimating Leak Emissions" (EPA - 453/R-95-017, November 1995). [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 2,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
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 shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Hot oil heater shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Permittee shall comply with applicable monitoring, inspection, maintenance, and recordkeeping, and reporting requirements of 40 CFR Part 60 Subpart KKK and Rule 4409. [40 CFR Part 60 Subpart KKK and District Rule 4409] Federally Enforceable Through Title V Permit
27. 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]

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