



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

AUG 28 2012

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # S-1328
Project # 1121917

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Exxon Mobil Corporation, located at the Hill Lease in the South Belridge Oil Field, within the ExxonMobil's heavy oil production stationary source in the western Kern County fields, which has been issued a Title V permit. Exxon Mobil Corporation is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project authorizes consolidation of TEOR wells permitted under S-1328-7, S-1328-25, and S-1328-57 into one permit (S-1328-7).

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # S-1328-7-14 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. 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,



David Warner
Director of Permit Services

Enclosures
cc: Richard Edgehill, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

AUG 28 2012

Greg Manuel
Exxon Mobil Corporation
Port Hueneme Support Facility
5901 Arcturus Road
Oxnard, CA 93033-9003

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # S-1328
Project # 1121917**

Dear Mr. Manuel:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes consolidation of TEOR wells permitted under S-1328-7, S-1328-25, and S-1328-57 into one permit (S-1328-7).

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. 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,

David Warner
Director of Permit Services

Enclosures
cc: Richard Edgehill, Permit Services

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ExxonMobil
S1328, 1121917

Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4401 Steam Enhanced Crude oil Production Wells (6/16/11)
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 wells permitted under '-7, '-25, and '-57 are located at the Hill Lease in the South Belridge Oil Field, within the ExxonMobil's Heavy Oil Western Stationary Source, NE 1/4, NW 1/4, and SW 1/4 Section 19, Township 28S, Range 21E. The facility address is 18271 Hwy 33, McKittrick, CA 93251. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

S-1328-7

Exxon operates a casing vent vapor recovery (CVR) system serving the 86 steam drive wells at its Hill Property. Vapors collected by the CVR are incinerated in the three steam generators (S-1328-1, '-2, and '-3) and the waste gas flare (S-1328-7). The expected vapor control efficiency is 99% by weight.

S-1328-25

Up to 45 wells permitted under S-1328-25 are operated uncontrolled.

S-1328-57

Wells permitted under S-1328-57 are operated with closed casing vents. Gas produced by these wells flows with produced fluids to tanks served by a common vapor collection system venting to three steam generators (S-1328-1, '-2, and '-3) and waste gas flare (S-1328-7). The expected vapor control efficiency is 99%.

Proposed Modifications

Applicant has requested that TEOR wells permitted under S-1328-7, S-1328-25, and S-1328-57 be consolidated into one permit (S-1328-7). All wells will be operated as vapor controlled wells as required by permit S-1328-7 and District Rule 4401.

V. Equipment Listing

Pre-Project Equipment Description:

S-1328-7-13: THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING

~~S-1328-25-3: UP TO 5 UNCONTROLLED CYCLICALLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING (TO BE CANCELLED)~~

~~S-1328-57-2: 40 THERMALLY ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS (TO BE CANCELLED)~~

Proposed Modification:

S-1328-7-14: MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING: COMBINE WELLS LISTED IN S-1328-7, '-25 AND '-57 INTO S-1328-7 AND LIMIT THE NUMBER OF STEAM DRIVE WELLS TO 171

Post Project Equipment Description:

S-1328-7-14: THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 171 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING

VI. Emission Control Technology Evaluation

VOC emissions from the S-1328-7 steam-enhanced wells, including wells from S-1328-25 and '-57, will be served by a vapor control system with a vapor control efficiency of 99%.

VII. General Calculations

A. Assumptions

The following assumptions are made in the analysis and calculations below:

S1328-7

Flare (project 1053054)

- Waste Gas Heating Value: 500 Btu/scf (laboratory analysis)
- Standby flare is fired primarily on waste gas
- Standby flare is limited to 1 MMscf of waste gas per day (current permit)

The fugitive emissions DEL are stated in condition #6 below.

6. Fugitive VOC emission rate from TEOR components shall not exceed 123.8 lb/day. [District Rule 2201] Y

For this project PE1 fugitive emissions are restated assuming 31% VOCs by wt of hydrocarbons. PE1 component counts listed below are conservatively high including safety factor of 1.2 as proposed. PE2 components counts also listed below do not include a safety factor. However, PE2 emissions are multiplied by 1.2 (as proposed).

PE1

1,158 gas valves
38 compressor (pump) seals
234 gas others
3,516 gas connectors
1,224 gas flanges

IPE2 (added components with S-1328-25 and '-57)

255 gas valves
85 gas others
765 gas connectors
340 gas flanges

SLC

3 x PE for '-1, '-2, '-3 x 0.87 (throttle factor), flare emissions not included in calculation, annual emissions = 365 x daily emissions

S-1326-26

Emissions were not previously established and are based on 3.6 lb-VOC/day/well as explained below.

B. Emission Factors

S-1328-7 Flare

The following NO_x, PM₁₀, CO, and VOC emission factors and DEL (SO_x) are listed in Condition # 7 of PTO S-1328-7-13.

PM10: 0.0202 lb/MMBTU
SOx (as SO2): 115.0 lb/day
NOx (as NO2): 0.0725 lb/MMBTU
VOC: 0.0021 lb/MMBTU
CO: 0.022 lb/MMBTU

S-1328-7 fugitive emissions

Fugitive emissions are determined per District Policy SSP-2015 using the average emission factors for oil and gas production operations in the EPA's 1995 document "Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017, November 1995).

S-1328-26

The emission factor of 3.6 lb-VOC/day/well found in the SJVUAPCD's DRAFT STAFF REPORT - Proposed Amendments to Rule 4401 (Steam-Enhanced Crude Oil Production Well Vents), APPENDIX B Emissions Reduction Analysis (October 25, 2006) (**Attachment II**).

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-1328-7

Flare emissions

$1.0 \text{ MMscf/day} \times 500 \text{ MMBtu/MMscf} = 500 \text{ MMBtu/day}$

$\text{NO}_x: 0.0725 \text{ lb/MMBtu} \times 500 \text{ MMBtu/day} = 36.3 \text{ lb/day}$

$\text{SO}_x: 115 \text{ lb/day (PTOs S-1328-1-14, 2-14, and '3-15 ' - 7-7)}$

$\text{PM}_{10}: 0.0202 \text{ lb/MMBtu} \times 500 \text{ MMBtu/day} = 10.1 \text{ lb/day}$

$\text{CO}: 0.022 \text{ lb/MMBtu} \times 500 \text{ MMBtu/day} = 11.0 \text{ lb/day}$

$\text{VOC}: 0.0021 \text{ lb/MMBtu} \times 500 \text{ MMBtu/day} = 1.1 \text{ lb/day}$

Fugitive Emissions

VOC (fugitive emissions): 140.1 lb/day (51,137 lb/yr) (**Attachment III**)

PTO S-1328-7-13

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)*
NO _x	36.3	
SO _x	115.0	
PM ₁₀	10.1	
CO	11.0	
VOC	140.1 + 1.1 = 141.2	51,137

*flare emissions included in SLC with emissions from '1, '2, and '3

S-1328-26

$$\begin{aligned} \text{Daily PE1}_{\text{VOC}} &= (45 \text{ wells}) \times (3.6 \text{ lb/VOC/day/well}) = \underline{162.0 \text{ lb/day}} \\ \text{Annual PE1}_{\text{VOC}} &= \text{Daily PE1}_{\text{VOC}} \times 365 \text{ days/year} \\ &= \underline{59,130 \text{ lb/yr}} \end{aligned}$$

S-1328-57

VOC: 1.2 lb/day, 438 lb/yr (Condition #3 PTO S-1328-57-2)

SLC (Condition #9 PTO S-1326-7-13)

$$\begin{aligned} \text{NO}_x &: 3 \times 0.018 \text{ lb/MMBtu} \times 62.5 \text{ MMBtu/hr} \times 24 \text{ hr/day} \times 0.87 \\ &= 70.5 \text{ lb/day, } 25,733 \text{ lb/yr} \end{aligned}$$

$$\text{SO}_x: 115 \text{ lb/day, } 41,975 \text{ lb/yr}$$

$$\text{PM}_{10}: 3 \times 0.005 \text{ lb/MMBtu} \times 62.5 \text{ MMBtu/hr} \times 24 \text{ hr/day} \times 0.87 = 19.6, 7,154 \text{ lb/yr}$$

$$\text{CO}: 3 \times 0.016 \text{ lb/MMBtu} \times 62.5 \text{ MMBtu/hr} \times 24 \text{ hr/day} \times 0.87 = 62.6 \text{ lb/day, } 22,849 \text{ lb/yr}$$

$$\text{VOC}: 3 \times 0.003 \text{ lb/MMBtu} \times 62.5 \text{ MMBtu/hr} \times 24 \text{ hr/day} \times 0.87 = 11.7 \text{ lb/day, } 4,271 \text{ lb/yr}$$

SLC (emissions from '-1, '-2, '-3, and flare '-7)

	Annual Emissions (lb/year)
NO _x	25,733
SO _x	41,975
PM ₁₀	7,154
CO	22,849
VOC	4,271

2. Post Project Potential to Emit (PE2)

SSIPE with addition of wells to '-7

VOC: 35.8 lb/day, 13,067 lb/yr (**Attachment III**)

S-1328-7

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	36.3	
SO _x	115.0	
PM ₁₀	10.1	
CO	11.0	
VOC	141.2 + 35.8 x 1.2 = 184.2	51,137 + 13,067 = 64, 204

*flare emissions included in SLC with emissions from '-1, '-2, and '-3

SLC (emissions from '1, '2, '3, and flare '7)

	Annual Emissions (lb/year)
NO _x	25,733
SO _x	41,975
PM ₁₀	7,154
CO	22,849
VOC	4,271

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

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			Adjusted SSPE1 (no fugitive emissions)	
Permit Unit	Equipment	VOC (lb/yr)	Fugitive?	VOC (lb/yr)
S-1328-1	steam generator	4,271 (SLC)	No	4,271
S-1328-2	steam generator			
S-1328-3	steam generator			
S-1328-7	flare			
	wells	51,137	Yes	n/a
S-1328-25	wells	59,130	Yes	n/a
S-1328-55	IC engine	77	No	77
S-1328-57	wells	438	Yes	n/a
S-1328-58	Wemco	183	Yes	n/a
SSPE1 _{permit units}		115,236	-	4,348
ERC Total		0	-	0
SSPE1 Total		115,236 (115,159 without '55)		4,348

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-1328-1, '-2, '-3, '-7, '-25, '-57, and '-58	25,733*	41,975*	7,154*	22,849*	115,159
S-1328-55	750	0	26	168	77
SSPE1	26,483	41,975	7,180	23,017	115,236

*'-1, '-2, '-3, '-7 flare SLC

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.

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. There are not, to ExxonMobil's knowledge, any VOC ERCs for actual emission reductions that occurred at this source which have been banked since September 19, 1991.

SSPE2			Adjusted SSPE2 (no fugitive emissions)	
Permit Unit	Equipment	VOC (lb/yr)	Fugitive?	VOC (lb/yr)
S-1328-1	steam generator	4,271 (SLC)	No	4,271
S-1328-2	steam generator			
S-1328-3	steam generator			
S-1328-7	flare			
	wells	51,137+13,067 = 64,204	Yes	n/a
S-1328-55	IC engine	77	No	77
S-1328-58	Wemco	183	Yes	n/a
SSPE2 _{permit units}		62,735	-	4,348
ERC Total		0	-	0
SSPE2 Total		62,735 (62,658 without '-55)		4,348

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-1328-1, '-2, '-3, '-7, and '-58	25,733*	41,975*	7,154*	22,849*	62,658
S-1328-55	750	0	26	168	77
SSPE2	26,483	41,975	7,180	23,017	62,735

* '-1, '-2, '-3, and flare '-7 SLC

5. 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. However, for the purposes of determining major source status, the SSPE2 shall not include 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."

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	26,483	41,975	7,180	23,017	4,348
SSPE2	26,483	41,975	7,180	23,017	4,348

Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No

As seen in the table above, the facility is not an existing Major Source for NOx only and is not becoming a Major Source for any pollutant as a result of this project.

6. Baseline Emissions (BE)

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

Pursuant to 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.

As shown in Section VII.C.5 above, the facility is not a Major Source for VOCs which is the only affected pollutant in the project.

Therefore BE=PE1.

S-1328-7:

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

BE (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-1328-7	na	na	na	na	51,137

*na – not applicable – annual flare emissions included in '1, '2, '3, and flare '7 SLC

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

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

8. Federal Major Modification

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

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

9. 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. QNEC is calculated below.

S-1328-7

QNEC			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	Na	Na	0
SO _x	Na	Na	0
PM ₁₀	Na	Na	0
CO	Na	Na	0
VOC	64,204	51,137	3,267

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*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- 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

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

With the consolidation of '-7, '-25, and '-57 into '-7 only the '-25 uncontrolled wells have an emissions change and change in emissions factor. The decrease in emissions from the '-25 wells is solely the result of a change in emissions factor and therefore,

$$\text{PE2} = \text{PE1} \times \text{EF2}/\text{EF1}$$

$$\begin{aligned} \text{AIPE} &= \text{PE1} \times \text{EF2}/\text{EF1} - (\text{PE1} * (\text{EF2}/\text{EF1})) \\ &= 0 \text{ lb/day} \end{aligned}$$

As demonstrated above, the AIPE is less than 2.0 lb/day for VOC and BACT for VOCs is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 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.

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	PM₁₀	CO	VOC
SSPE2	26,483	41,975	7,180	23,017	62,735
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	Yes	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO_x and VOCs only. Therefore offset calculations will be required for this project.

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

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, 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 are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$

	<u>PE2 (lb/yr)</u>	<u>BE (PE1) (lb/yr)</u>
S-1328-7	64,204	51,137
S-1328-25	0	59,130
S-1328-57	0	438

$$\begin{aligned}\Sigma[PE2 - BE] &= 64,204 - 51,137 - 59,130 - 438 \\ &= \underline{-46,501 \text{ lb/yr}}\end{aligned}$$

As demonstrated in the calculation above, $\Sigma[PE2 - BE]$ is less than zero. Therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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 VII.C.7, 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	26,483	26,483	20,000 lb/year	No
SO _x	41,975	41,975	54,750 lb/year	No
PM ₁₀	7,180	7,180	29,200 lb/year	No
CO	23,017	23,017	200,000 lb/year	No
VOC	115,236	62,735	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. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	26,483	26,483	0	20,000 lb/year	No
SO _x	41,975	41,975	0	20,000 lb/year	No
PM ₁₀	7,180	7,180	0	20,000 lb/year	No
CO	23,017	23,017	0	20,000 lb/year	No
VOC	62,735	115,236	-52,501	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

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.

Proposed Rule 2201 (DEL) Conditions:

Fugitive VOC emission rate from TEOR components shall not exceed 184.2 lb/day. [District Rule 2201] Y

VOC content of TEOR gas processed shall not exceed 31% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 1070 and District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

The following monitoring is required to demonstrate compliance with Rule 2201.

Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District Rule 2201] Y

Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Sampler pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201] Y

Permittee shall measure daily the non-condensables gas flow rate and, at least monthly, the non-condensable gas H₂S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Y

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:

The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Y

Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Sampler pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201] Y

Permittee shall measure daily the non-condensables gas flow rate and, at least monthly, the non-condensable gas H2S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Y

Permittee shall maintain accurate daily records of volume noncondensable gas incinerated in flare. [District Rule 1070] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

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

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
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/minor modification application.

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Consolidation of the three permit units with all three served by vapor control

is not expected to affect the rule compliance status. Therefore, continued 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 associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4311 Flares

This rule limits VOC and NOx emissions from flares. The current PTO includes conditions ensuring compliance with the rule. Consolidation of permit units '-7, '-25, and '-57 into '-7 with all three served by vapor control is not expected to affect the rule compliance status. Therefore, continued compliance with this rule is expected.

Rule 4401 Steam-enhanced Crude Oil Production Well Vents

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems. The current permit includes conditions ensuring compliance. Consolidation of the three permit units with all three served by vapor control is not expected to affect the rule compliance status. Therefore, continued 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 associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

California Health & Safety Code 42301.6 (School Notice)

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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) is exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Compliance with all applicable rules and regulations is expected. Pending a successful COC review period, issue Authority to Construct S-1328-7-14 subject to the permit conditions on the attached draft ATC in **Attachment V**.

Attachments

- I: PTOs S-1327-7-13, '-25-3, and '-57-2
- II: SJVUAPCD's DRAFT STAFF REPORT - Proposed Amendments to Rule 4401 (Steam-Enhanced Crude Oil Production Well Vents), APPENDIX B Emissions Reduction Analysis (October 25, 2006) PE1 and PE2 Calculations
- III: Fugitive Emissions Calculations
- IV: Emissions Profiles
- V: Draft ATCs

ExxonMobil
S1328, 1121917

ATTACHMENT I
PTOs S-1327-7-13, '-25-3, and '-57-2

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1328-7-13

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain a current list of all steam enhanced wells, including identification of all steam enhanced wells with polish rod boxes subject to BACT I&M program connected to this system, and shall update the list whenever a well is added, replaced or deleted. The updated list shall be submitted to the District 60 days prior to the permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor control system shall serve thermally enhanced well vents, permit exempt heater treaters, and Wemco S-1328-58. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Scrubbing solution shall consist only of Sulfa-Check and/or Sulfa-Treat media and additives unless prior District approval is obtained. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Noncondensable vapor gas from this well vent vapor control system may be incinerated in the following devices: steam generator permits S-1328-1, S-1328-2, and S-1328-3, and the standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Noncondensable vapor gas throughput to flare shall not exceed 0.333 MMscf per day if two (2) or three (3) steam generators are in operation, 0.666 MMscf if one (1) steam generator is in operation, and 1.0 MMscf per day if none of the steam generators are in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emission rate from TEOR components shall not exceed 123.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from the standby flare shall not exceed any of the following: NO_x (as NO₂): 0.0725 lb/MMBtu, SO_x (as SO₂): 115.0 lb/day, PM₁₀: 0.0202 lb/MMBtu, CO: 0.022 lb/MMBtu, or VOC: 0.0021 lb/MMBtu. [District Rules 2201, 4201, 4301 and 4801] Federally Enforceable Through Title V Permit
8. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H₂S in sweet gas, P2 = ppmv H₂S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual combustion emissions from units S-1328-1, -2, -3 and the flare identified on S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] 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.

12. Standby flare shall comply with all requirements of District Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
13. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
14. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
15. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
16. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
17. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
18. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
19. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District Rule 2201] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
22. Permittee shall measure daily the non-condensibles gas flow rate and, at least monthly, the non-condensable gas H₂S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
23. Permittee shall maintain accurate daily records of volume noncondensable gas incinerated in flare. [District Rule 1070] Federally Enforceable Through Title V Permit
24. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
25. Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing shall be exempt from the requirements of Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
26. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit
27. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6] 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.

28. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
29. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
30. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
31. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
32. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
33. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
34. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
35. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
36. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] 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.

37. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
38. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
39. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.6] Federally Enforceable Through Title V Permit
40. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
41. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
42. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
43. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
44. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
45. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
46. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
47. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
48. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1] 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.

49. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
50. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
51. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
52. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
53. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
54. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
55. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
56. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
57. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
58. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] 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.

59. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4] Federally Enforceable Through Title V Permit
60. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
61. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
62. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
63. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
64. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
65. The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1328-25-3

EXPIRATION DATE: 03/31/2016

EQUIPMENT DESCRIPTION:

UP TO 5 UNCONTROLLED CYCLICALLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit. [District Rule 4401 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.4, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.2.2 and 4.4.2] Federally Enforceable Through Title V Permit
3. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District Rule 4401] Federally Enforceable Through Title V Permit
4. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 Section 4.4 shall not exceed 5. [District Rule 4401, 4.4] Federally Enforceable Through Title V Permit
5. Total number of uncontrolled cyclic wells undergoing pilot testing (pursuant to Rule 4401 section 4.2) shall not exceed 40. [District Rule 4401, 4.2] Federally Enforceable Through Title V Permit
6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.2.1] Federally Enforceable Through Title V Permit
7. Wells undergoing pilot testing shall be located more than 1,000 feet from an existing well vent vapor collection and control system operated by the company. [District Rule 4401, 4.2.2] Federally Enforceable Through Title V Permit
8. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.25] Federally Enforceable Through Title V Permit
9. The operator of any new steam-enhanced crude oil production well, or any non-steam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. [District Rule 4401, 7.1] Federally Enforceable Through Title V Permit
10. Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. [District Rule 4401, 7.2] Federally Enforceable Through Title V Permit
11. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1328-57-2

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

40 THERMALLY ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Operation shall include no more than 40 steam enhanced crude oil production wells with closed casing vents. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to tanks S-1330-16, '17, '18, '19, '24, '25 and '26 that are vented to an approved vapor collection and control system achieving 99% control. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Volatile Organic Compound (VOC) emission rate shall not exceed 1.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
5. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
6. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit
7. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6] Federally Enforceable Through Title V Permit
8. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
9. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] 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.

10. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
11. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
12. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
13. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
14. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
15. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
16. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
17. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
18. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
19. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.6] 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. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
21. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
22. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
23. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
24. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
25. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
26. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
27. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
28. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
29. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
30. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
31. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
32. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] 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.

33. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
34. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
35. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
36. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
37. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
38. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
39. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
40. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4] Federally Enforceable Through Title V Permit
41. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] 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.

42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
44. Permittee shall maintain a current list of all steam-enhanced wells with closed casing vents authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. Upon request, the current list of wells authorized by this permit shall be submitted to the District's Compliance Division. [District Rule 2201] Federally Enforceable Through Title V Permit
45. Permittee shall retain copies of all previous lists of steam-enhanced wells with closed casing vents authorized by this permit. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by an Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
47. Steam-enhanced production wells with closed well casing vents shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of the closed casing vent wells. A copy of the written instructions shall be submitted to the District prior to implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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

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ATTACHMENT II
SJVUAPCD's DRAFT STAFF REPORT - Proposed Amendments to Rule 4401
(Steam-Enhanced Crude Oil Production Well Vents), APPENDIX B
Emissions Reduction Analysis (October 25, 2006)

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

APPENDIX B (VOC EMISSIONS REDUCTION)

July 25, 2006

3. It was assumed that the uncontrolled cyclic steam-enhanced oil wells that would become subject to the proposed rule requirements were distributed in the same proportion as the number of active cyclic steam-enhanced oil wells with open well vents and closed well vents.
4. It was assumed that the uncontrolled VOC emissions from cyclic steam-enhanced oil wells are 3.6 lb/day and that the uncontrolled VOC emissions from steam drive steam-enhanced oil wells are 220.3 lb/day. These emission factors, 3.6 lb/day and 220.3 lb/day, were used in this analysis as they are the emission factors used by ARB. District staff found that the District's Permit Division sometimes uses different emission factors, for example 13 lb/day for uncontrolled cyclic wells, as they better reflect the specific site being evaluated.
5. It was assumed that cyclic steam-enhanced oil wells are controlled to 99%. It is not possible to identify the number of cyclic wells subject to Section 5.4 (controlled to 50%) from the Permit database.
6. It was assumed that the average number of components and component types for steam-enhanced oil wells with open well vents connected to a collection and control system determined from a list of components received from a stakeholder would provide a reasonable estimate of components for use in this analysis. District staff used a list of components, provided by a stakeholder, of a group of steam-enhanced oil wells with open well vents connected to a collection and control system. Based on the stakeholder information, District staff was able to determine an average number, per well, of the components by component type for steam-enhanced oil wells with open well vents connected to a collection and control system.
7. It was assumed that the average number of components and component types for steam-enhanced oil wells with closed well vents determined from an inspection of several steam-enhanced oil wells with closed well vents would provide a reasonable estimate of components for use in this analysis. District staff inspected some steam-enhanced oil wells with closed well vents, determined the number and types of components employed and used that information for steam-enhanced oil wells with closed well vents.
8. It was assumed that open-ended lines would be capped. A cap was assumed to have the same ALR equation as a flange.
9. In using the EPA calculation methodologies, gas was assumed to be the type of service.
10. Note that the estimated VOC emissions reduction associated with the following provisions has not been included in the VOC emissions reduction:

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ATTACHMENT III
Fugitive Emissions Calculations

PE 2
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EPA Protocol for Equipment Leak Emission Estimate
Table 2-4. Oil and Gas Production Operations
Average Emission Factors

Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 31 %
 Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

Equipment Type	Service	Screening Value EF - TOC (lb/day/source)		Component Count	VOC emissions (lb/day)
		(kg/hr/source)	(lb/day/source)		
Valves	Gas	4.5E-03	2.381E-01	255	18.82
	Heavy Oil	8.4E-06	4.445E-04	0	0.00
	Light Oil	2.5E-03	1.323E-01	0	0.00
	Water/Oil	9.8E-05	5.185E-03	0	0.00
Pump Seals	Gas	2.4E-03	1.270E-01	0	0.00
	Heavy Oil	N/A	N/A	0	N/A
	Light Oil	1.3E-02	6.878E-01	0	0.00
	Water/Oil	2.4E-05	1.270E-03	0	0.00
Others	Gas	8.8E-03	4.656E-01	85	12.27
	Heavy Oil	3.2E-05	1.693E-03	0	0.00
	Light Oil	7.5E-03	3.968E-01	0	0.00
	Water/Oil	1.4E-02	7.408E-01	0	0.00
Connectors	Gas	2.0E-04	1.058E-02	765	2.51
	Heavy Oil	7.5E-06	3.968E-04	0	0.00
	Light Oil	2.1E-04	1.111E-02	0	0.00
	Water/Oil	1.1E-04	5.820E-03	0	0.00
Flanges	Gas	3.9E-04	2.064E-02	340	2.17
	Heavy Oil	3.9E-07	2.064E-05	0	0.00
	Light Oil	1.1E-04	5.820E-03	0	0.00
	Water/Oil	2.9E-06	1.534E-04	0	0.00
Open-ended Lines	Gas	2.0E-03	1.058E-01	0	0.00
	Heavy Oil	1.4E-04	7.408E-03	0	0.00
	Light Oil	1.4E-03	7.408E-02	0	0.00
	Water/Oil	2.5E-04	1.323E-02	0	0.00

Total VOC Emissions = 35.8 lb/day

1-7 PE I
 fugitives

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EPA Protocol for Equipment Leak Emission Estimate
 Table 2-4. Oil and Gas Production Operations
 Average Emission Factors

Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 31 %
 Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

Equipment Type	Service	Screening Value (kg/hr/source)	Screening Value EF - TOC (lb/day/source)	Component Count	VOC emissions (lb/day)
Valves	Gas	4.5E-03	2.381E-01	1,158	85.47
	Heavy Oil	8.4E-06	4.445E-04	0	0.00
	Light Oil	2.5E-03	1.323E-01	0	0.00
	Water/Oil	9.8E-05	5.185E-03	0	0.00
Pump Seals	Gas	2.4E-03	1.270E-01	38	1.50
	Heavy Oil	N/A	N/A	0	N/A
	Light Oil	1.3E-02	6.878E-01	0	0.00
	Water/Oil	2.4E-05	1.270E-03	0	0.00
Others	Gas	8.8E-03	4.656E-01	234	33.78
	Heavy Oil	3.2E-05	1.693E-03	0	0.00
	Light Oil	7.5E-03	3.968E-01	0	0.00
	Water/Oil	1.4E-02	7.408E-01	0	0.00
Connectors	Gas	2.0E-04	1.058E-02	3,516	11.53
	Heavy Oil	7.5E-06	3.968E-04	0	0.00
	Light Oil	2.1E-04	1.111E-02	0	0.00
	Water/Oil	1.1E-04	5.820E-03	0	0.00
Flanges	Gas	3.9E-04	2.064E-02	1,224	7.83
	Heavy Oil	3.9E-07	2.064E-05	0	0.00
	Light Oil	1.1E-04	5.820E-03	0	0.00
	Water/Oil	2.9E-06	1.534E-04	0	0.00
Open-ended Lines	Gas	2.0E-03	1.058E-01	0	0.00
	Heavy Oil	1.4E-04	7.408E-03	0	0.00
	Light Oil	1.4E-03	7.408E-02	0	0.00
	Water/Oil	2.5E-04	1.323E-02	0	0.00

Total VOC Emissions = 140.1 lb/day

÷ 1.2 = 116.8

ExxonMobil
S1328, 1121917

ATTACHMENT IV Emissions Profiles

Permit #: S-1328-7-14	Last Updated
Facility: EXXON MOBIL CORPORATION	08/27/2012 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):					64204.0
Daily Emis. Limit (lb/Day)	36.3	115.0	10.1	11.0	184.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	3266.0
Q2:	0.0	0.0	0.0	0.0	3267.0
Q3:	0.0	0.0	0.0	0.0	3267.0
Q4:	0.0	0.0	0.0	0.0	3267.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ExxonMobil
S1328, 1121917

ATTACHMENT V
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1328-7-14

LEGAL OWNER OR OPERATOR: EXXON MOBIL CORPORATION

MAILING ADDRESS: CORP-MI-3049
P O BOX 4358
HOUSTON, TX 77210-4358

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING; COMBINE WELLS LISTED IN S-1328-7, '-25 AND '-57 INTO S-1328-7 AND LIMIT THE NUMBER OF STEAM DRIVE WELLS TO 171

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current list of all steam enhanced wells, including identification of all steam enhanced wells with polish rod boxes subject to BACT I&M program connected to this system, and shall update the list whenever a well is added, replaced or deleted. The updated list shall be submitted to the District 60 days prior to the permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor control system shall serve thermally enhanced well vents, permit exempt heater treater, and Wemco S-1328-58. [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

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DAVID WARNER, Director of Permit Services

S-1328-7-14 : Aug 28 2012 7:42AM -- EDGEHILR : Joint Inspection NOT Required

5. Scrubbing solution shall consist only of Sulfa-Check and/or Sulfa-Treat media and additives unless prior District approval is obtained. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Noncondensable vapor gas from this well vent vapor control system may be incinerated in the following devices: steam generator permits S-1328-1, S-1328-2, and S-1328-3, and the standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Noncondensable vapor gas throughput to flare shall not exceed 0.333 MMscf per day if two (2) or three (3) steam generators are in operation, 0.666 MMscf if one (1) steam generator is in operation, and 1.0 MMscf per day if none of the steam generators are in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain accurate component count and emissions calculated using CAPCOA EPA Protocol for Leak Emissions Estimate Fugitive Hydrocarbon Leaks Oil and Gas Production Operations Average Emission Factors, Table 2-4, February 1999. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fugitive VOC emission rate from TEOR components shall not exceed 184.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of gas processed shall not exceed 31% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
11. Emission rates from the standby flare shall not exceed any of the following: NO_x (as NO₂): 0.0725 lb/MMBtu, SO_x (as SO₂): 115.0 lb/day, PM₁₀: 0.0202 lb/MMBtu, CO: 0.022 lb/MMBtu, or VOC: 0.0021 lb/MMBtu. [District Rules 2201, 4201, 4301 and 4801] Federally Enforceable Through Title V Permit
12. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H₂S in sweet gas, P2 = ppmv H₂S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from units S-1328-1, -2, -3 and the flare identified on S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
14. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Standby flare shall comply with all requirements of District Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
18. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
19. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
20. {2332} Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
21. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
23. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District Rule 2201] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. Permittee shall measure daily the non-condensibles gas flow rate and, at least monthly, the non-condensable gas H₂S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
27. Permittee shall maintain accurate daily records of volume noncondensable gas incinerated in flare. [District Rule 1070] Federally Enforceable Through Title V Permit
28. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
29. Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing shall be exempt from the requirements of Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
30. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit
31. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6] Federally Enforceable Through Title V Permit
32. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
33. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
34. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

35. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
36. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
37. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
38. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
39. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
40. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
41. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
42. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
43. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.6] Federally Enforceable Through Title V Permit
44. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
45. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

46. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
47. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
48. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
49. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
50. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
51. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
52. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
53. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
54. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
55. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
56. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
57. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
58. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

59. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
60. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
61. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
62. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval for TEOR gas, and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
63. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4] Federally Enforceable Through Title V Permit
64. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
65. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
66. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
67. {2457} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

68. {2458} Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
69. {2459} The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
70. PTOs S1328-25 -3 and '-57-2 shall be cancelled upon implementation of ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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