



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



NOV 16 2016

Mr. Gregory Pritchett
Chevron USA Inc
PO Box 1392
Bakersfield, CA 93302

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1128
Project # 1162368**

Dear Mr. Pritchett:

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

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

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

Thank you for your cooperation in this matter.

Sincerely,


Arnaud Marjollet
Director of Permit Services

Enclosures

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

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Authority to Construct Application Review

2000 bbl Fixed-Roof Oil Field Production Gas- Blanketed Drain Tank

Facility Name: Chevron U.S.A. Inc. (CUSA) Date: November 8, 2016
Mailing Address: PO Box 1392 Engineer: Richard Edgehill
Bakersfield, CA 93302 Lead Engineer: Dan Klevann
Contact Person: Gregory Pritchett and Kris Rickards
Telephone: (661) 654-7150, (661) 654-7796 (KR)
Application #(s): S-1128-1018-0
Project #: S-1162368
Deemed Complete: June 15, 2016

I. PROPOSAL

Chevron U.S.A. Inc. (CUSA) is requesting an Authority to Construct (ATC) for the installation of a new 2,000 barrel drain tank. The proposed tank will be used in conjunction with equipment located at the 2F Oil Cleaning Plant (OCP).

The increase in facility emissions will trigger BACT, offsets, and public notice.

CUSA Facility S-1128 is currently operating under a Title V Permit. This project is a Federal Major Modification and is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20 and can be processed with a Certificate of Conformity (COC). The facility has specifically requested that this project be processed in that manner; therefore, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. CUSA must apply to administratively amend their Title V permit.

II. APPLICABLE RULES

Rule 2201 New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
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 4623 Storage of Organic Liquids (5/19/05)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

CCR, Title 14, Div 6, Chap 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

The project is located at the 2F (Oil Cleaning Plant (OCP), Midway Sunset Oilfield, CUSA's Western Kern County field heavy oil production stationary source. This location is not located within 1,000 feet of a K-12 school.

IV. PROCESS DESCRIPTION

The proposal is for the installation of a 2,000 barrel drain tank at the 2F oil cleaning plant. The tank will be equipped with a pressure-vacuum (PV) relief vent valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve will reduce VOC wind induced emissions from the tank vent.

The tank will be equipped with a gas blanketing system which will maintain the tank's vapor space above the upper explosive limit (gas becomes too rich to burn) by the addition of PUC-quality natural gas. Applicant has stated that the PV vent will be set at a pressure higher than expected internal pressure spikes from daily spikes due to temperature changes. The tank is expected to be empty over 90% of the time.

The gas blanket gas exits to atmosphere through the relief valve once enough liquid enters the tank. Once the liquid level is reduced a regulator will allow pressure in the tank to build back up.

A diagram of the gas blanket system is included in **Attachment I**.

V. EQUIPMENT LISTING

ATC Equipment Description:

S-1128-1018-0: 2000 BBL DRAIN TANK WITH NATURAL GAS BLANKETING (2F OCP)

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The tank will be equipped with a pressure-vacuum (PV) relief vent valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve will reduce VOC wind induced emissions from the tank vent. The tank will be equipped with a gas blanketing system which will maintain the tank's vapor space above the upper explosive limit by the addition of PUC quality natural gas.

VII. GENERAL CALCULATIONS

A. Assumptions

- The tank operates as a spill prevention container. It will also be used periodically for routine removal of fluids (drains and maintenance).
 - The tank is a potential source of volatile organic compound (VOC) emissions.
 - Maximum throughput = 2,000 bbl/day and 70,000 bbl/yr
 - The tank paint conditions are good, the color is gray and the shade is medium.
 - TVP of oil = 0.5 psia (Applicant)
 - Tank temperature, 200 °F
 - Tank will be equipped with a pump which activates at 5 feet, pumping liquid from the tank to a pipeline. The pump shuts off when the liquid level reaches 4 feet. Therefore, an average height of 4 feet was used to calculate emissions from the tank.
 - For Greenhouse Gas (GHG) Emissions tank emissions are assumed to be 100% methane.
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- The VOC content of the gas blanket vapors does not exceed 10% by weight (9/9/16 applicant email, **Attachment II**). In accordance with District SSP 2015 policy "Quantifying Fugitive VOC Emissions at Petroleum and SOCOMI Facilities", VOC emissions are not assessed to piping and components handling vapor streams with a VOC content of 10% and therefore fugitive emissions components do not emit VOCs.
 - Fugitive emissions associated with the gas blanket system were neglected in the emissions used for the HRA.

B. Emission Factors

Emissions from the uncontrolled tank with a PV valve were calculated using the District's spreadsheet for crude oil/organic liquids with API gravity < 26 degrees (**Attachment III**).

Greenhouse Gas (GHG) Emissions Calculations

GWP for CH₄ = 21 lb-CO₂e per lb-CH₄
GWP for N₂O = 310 lb-CO₂e per lb-N₂O

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions units, PE1 = 0 for all criteria pollutants.

2. Post-Project Potential to Emit (PE2)

Post-Project Potential to Emit (PE2)			
Permit Unit	Location	VOC – Daily PE2 (lb/day)	VOC – Annual PE2 (lb/yr)
S-1128-1018-0	2F	103.00	4,588

GHG Emissions

4,588 lb/yr CH₄ x 21 lb-CO₂e per lb-CH₄ x short ton/2000 lb x 0.9072 metric tons/short ton = 43.7 mtons/yr < 230 mtons/yr

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

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

Pursuant to District Rule 2201, the Pre-Project Stationary Source Potential to Emit (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 that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. An estimate* of SSPE1 is provided below.

*SSPE Calculator (7-19-16, PTOs only)

	lb/yr	Tons/yr
NOx	748,121	374
SOx	2,121,476	1,061
PM10	554,561	277
CO	1,379,562	690
VOC	1,601,897	801

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 Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

As shown above, facility emissions are already above the Offset and Major Source Thresholds for all criteria air contaminants.

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
	NO_x	SO_x	PM₁₀	PM_{2.5}	CO	VOC
SSPE1	748,121	2,121,476	554,561	554,561	1,379,562	1,601,897
SSPE2	748,121 (374 tons)	2,121,476	554,561	554,561	1,379,562	1,606,485
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	yes	yes	yes	yes	yes

Note: PM2.5 assumed to be equal to PM10

Annual emissions do not include emissions increases from outstanding ATCs

As seen in the table above, the facility is an existing Major Source for NO_x, SO_x, PM₁₀, CO, and VOCs.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/yr)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase (tpy)	374					
PSD Major Source Thresholds (tpy)	250	250	250	250	250	250
PSD Major Source? (Y/N)	y					

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

6. Baseline Emissions (BE)

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

Since this is a new emissions units, $BE = PE_1 = 0$ for VOC.

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."

As discussed in Section VII.C.6 above, the facility is an existing Major Source for all criteria air contaminants.

Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	Major Modification
VOC	4,588	50,000	N

The project's PE2 is less than the SB 2588 Major Modification Threshold for VOC.

8. Federal Major Modification

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

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

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x	0	0	Yes
VOC	4,588	0	Yes
PM ₁₀	0	30,000	No
SO _x	0	80,000	No

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification and no further analysis is required.

Federal Offset Quantities:

The Federal offset quantity is calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

Only pollutants for which the project is a Federal Major Modification have Federal offset quantities. The calculated Federal offset quantity, listed in the table below, is entered into the Major Modification tracking spreadsheet under the heading "Federal Offset Quantity"

NOx		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-1128-1018	0	4,588	4,588
Net Emission Change (lb/year):			4,588
Federal Offset Quantity: (NEC * 1.5)			6,882

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

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

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Sulfuric acid mist
- Hydrogen sulfide (H2S)
- Total reduced sulfur (including H2S)
- Reduced sulfur compounds

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the

total potentials to emit from all new and modified units are below the applicable thresholds, no further PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
 PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
 BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly BE is calculated in the following tables:

QNEC			
Pollutant	PE2	BE	QNEC
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	4,588	0	1,147

VIII. COMPLIANCE

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

As seen above, the applicant is proposing to install a new tank with a PE greater than 2 lb/day for VOC. BACT is triggered for VOC since the PE is greater than 2 lb/day.

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

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

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

As discussed in Section I above, there are no modified emissions units associated with this project; therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed above, this project constitutes a Federal Major Modification for VOC; therefore BACT is triggered for VOC Federal Major Modification purposes.

2. BACT Guideline

BACT Guideline 7.3.1 applies to tanks/vessels issued (see **Attachment V**).

3. Top-Down BACT Analysis

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

VOC: PV-vent set to within 10% of maximum allowable pressure.

Proposed Rule 2201 BACT Condition:

This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201]

Note that the BACT Technologically Feasible requirement of vapor control was not found to be cost effective.

B. Offsets

1. Offset Applicability

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

The applicant concedes they are over the offset threshold for VOCs. Therefore offsets are triggered for the emissions increases associated with this project approval.

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOCs; therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year 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 = Pre-project Potential to Emit 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)

BE = 0 for this new emissions unit.

The facility is proposing to install a new emissions unit; therefore Baseline Emissions are equal to zero. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = PE2 x DOR

The project is a federal Major modification and therefore the Distance Offset Ratio (DOR) is 1.5:1. The required offsets and proposed ERCs are summarized below:

The DOR is 1.5:1 as the project is a Federal Major Modification.

Offsets Required (lb/year) = $4,588 \times 1.5$
= 6,882 lb VOC/year

Calculating the appropriate quarterly emissions to be offset is as follows:

Quarterly offsets required (lb/qtr) = $(6,882 \text{ lb VOC/year}) \div (4 \text{ quarters/year})$
= 1,720.5 lb/qtr

Calculating the appropriate quarterly emissions to be offset is as follows:

As shown in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets				
(where X is the annual amount of offsets, and $X \div 4 = Y.z$)				
Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Y	Y+1
.5	Y	Y	Y+1	Y+1
.75	Y	Y+1	Y+1	Y+1

Therefore the appropriate quarterly emissions to be offset are as follows:

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>Total Annual</u>
1,720	1,720	1,721	1,721	6,882

The following ERCs will be used to offset the emissions increase for the project.

Current Certificate	1Q	2Q	3Q	4Q	Total
S-410-1	5	7	11	15	38
S-3404-1	171	202	232	232	837
S-4004-1	460	466	471	470	1,867
S-4110-1	90	93	83	66	332
S-4549-1	0	182 (42 to Q1)	257 (157 to Q1)	114	553
From S-4549-1 2Q	42				
From S-4549-1 3Q	157				
S-1878-1	230	136	143	82	591
S-1912-1	225	238	250	250	963
S-1983-1	340	438	431	492	1701
Total	1,720	1,762 (1720 +42)	1,878 (1,721+157)	1,721	6,882
Total Offsets/Qtr	1,720	1,720	1,721	1,721	6,882

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,720 lb, 2nd quarter – 1,720 lb, 3rd quarter – 1,721 lb, and fourth quarter - 1721 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Y

ERC Certificate Numbers S-410-1, S-3404-1, S-4004-1, S-4110-1, S-4549-1, S-1878-1, S-1912-1, and S-1983-1 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Y

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project is a Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is 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. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

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	>20,000 lb/year	>20,000 lb/year	20,000 lb/year	No
SO _x	>54,750 lb/year	>54,750 lb/year	54,750 lb/year	No
PM ₁₀	>29,200 lb/year	>29,200 lb/year	29,200 lb/year	No
CO	>200,000 lb/year	>200,000 lb/year	200,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	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	>20,000 lb/year	>20,000 lb/year	0	20,000 lb/year	No
SO _x	>54,750 lb/year	>54,750 lb/year	0	20,000 lb/year	No
PM ₁₀	>29,200 lb/year	>29,200 lb/year	0	20,000 lb/year	No
CO	>200,000 lb/year	>200,000 lb/year	0	20,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	4,588	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.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

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

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The permit DELs will be included as follows.

- *This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]*
- *Tank liquid throughput shall not exceed 2,000 barrels per day or 70,000 barrels per year. [District Rule 2201]*
- *VOC emission rate from the tank shall not exceed 103 lb/day or 4,588 lb/year. [District Rule 2201]*

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

No monitoring is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. A condition addressing this requirement is included on the S-1128 facility-wide permit.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. There are no AAQA standards for VOCs and therefore an AAQA is not required.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. CUSA's compliance certification is included in **Attachment VII.**

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to authorize an organic liquid transfer operation.

Since the project will provide a tank to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

The project is Federal Major Modification and therefore is also a Title V Significant Modification. 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 Title V Compliance Certification form is included in **Attachment VIII.**

District Rule 4001 New Source Performance Standards

This rule incorporates the New Source Performance Standards from 40 CFR Part 60. 40 CFR Part 60, Subparts K, Ka, Kb and OOOO could potentially apply to the tanks located at this facility. However, Subparts K, Ka and Kb do not apply to storage vessels less than 10,000 barrels used for petroleum or condensate that is stored, processed and/or treated at a drilling and production facility prior to transfer. Subpart OOOO has no standards for tanks with annual VOC emissions less than 6 tons per year.

Therefore, the requirements of these subparts are not applicable to this project.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment IX**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1128-1018-0	0.224 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District Rule 4623 Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held or stored.

Per Section 4.4, tanks exclusively receiving and/or storing organic liquids with a TVP less than 0.5 psia are exempt from this rule except for complying with Sections 6.2, 6.3.6, 6.4, and 7.2. This tank will be limited to receiving and/or storing organic liquids with a TVP less than 0.5 psia. The following condition shall be placed on the ATC:

- *{2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]*

The tank will not be served by a vapor control system. The applicant has elected to participate in the voluntary tank preventative inspection, maintenance, and tank cleaning program. Tank cleaning will be conducted according to the requirements of Table 6. As the tank is not subject to the requirements of District Rule 4623, the rule reference will be changed to District Rule 2080.

As this tank will not be equipped with a vapor recovery system, TVP and API gravity testing is required. The following conditions will be included on the permit:

- *Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or representative tank as provided in District Rule 4623, at least once every 24 months during summer (July-September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from this rule. [District Rule 4623]*
- *{2482} The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 "Standard Test Method for API Gravity of Crude Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D-4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623]*
- *{2483} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in*

*Heavy Crude Oil using Gas Chromatograph", as approved by ARB and EPA.
[District Rule 4623]*

- *Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank. [District Rule 4623]*
- *{2911} The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct API gravity testing. [District Rule 4623]*
- *The permittee shall keep accurate records of API gravity, true vapor pressure, storage temperature and types of liquids stored. [District Rules 2201 and 4623]*
- *Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]*

Heavy Oil Tank Inspection and Maintenance:

- *Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 2080]*
- *Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2080]*
- *Upon detection of a gas leak, defined as a VOC concentration greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours of detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best management practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2080]*
- *Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was*

discovered, and date/time the component was repaired to be a leak-free condition. [District Rule 2080]

- *Leaking components that have been discovered by the operator that have been tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by the District staff that were not previously identified and/or tagged by the operator, and/or leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2080]*
- *If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2080]*
- *Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 2080]*

Heavy Oil Tank Cleaning:

- *Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in the permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623 or 2080]*
- *This tank shall not be required to de-gas before commencing cleaning activities. All other applicable requirements shall be complied with before, during, and after tank cleaning activities. [District Rule 4623 or 2080]*
- *While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 2080]*
- *Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 2080]*

Compliance with District Rule 4623 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

District is a Responsible Agency

Oil and gas operations in Kern County must comply with the *Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting*. In 2015, Kern County revised the Kern County Zoning Ordinance Focused on Oil and Gas Activities (Kern Oil and Gas Zoning Ordinance) in regards to future oil and gas exploration, and drilling and production of hydrocarbon resource projects occurring within Kern County.

Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The EIR evaluated and disclosed to the public the environmental impacts associated with the growth of oil and gas exploration in Kern County, and determined that such growth will result in significant GHG impacts in the San Joaquin Valley. As such, the EIR included mitigation measures for GHG.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible

Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating GHGs. The District has determined that the applicant is responsible for implementing GHG mitigation measures imposed in the EIR by the Kern County for the Kern County Zoning Ordinance.

District CEQA Findings

The proposed project is located in Kern County and is thus subject to the *Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting*. The *Kern County Zoning Ordinance* was developed by the Kern County Planning Agency as a comprehensive set of goals, objectives, policies, and standards to guide development, expansion, and operation of oil and gas exploration within Kern County.

In 2015, Kern County revised their *Kern County Zoning Ordinance* in regards to exploration, drilling and production of hydrocarbon resources projects. Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The revised Kern County Zoning Ordinance establishes a written process (Conformity Review permit process or Minor Activity permit) by which oil and gas exploration projects involving site-specific operations can be evaluated to determine whether the environmental effects of the operation were covered in the *Kern County Zoning Ordinance* EIR.

For stationary source emissions that are below the offset threshold, i.e. not required to surrender ERCs, and for non-stationary source emissions, Kern County entered into an Oil and Gas Emission Reduction Agreement (Oil and Gas ERA) with the District pursuant to the EIR. Per the Oil and Gas ERA, the applicant shall fully mitigate project emissions that are not required to be offset by District permit rules and regulations. Such mitigation can be achieved through any of the three options: (1) the applicants pay an air quality mitigation fee with each Oil and Gas Conformity Review permit issued by the Kern County, (2) the applicants may develop and propose to implement their own emission reduction projects instead of paying all or part of the mitigation fee, or (3) the applicants will be allowed to enter into an agreement directly with the District (if approved by Kern County) to develop an alternative fee schedule.

Kern County, as the lead agency, is the agency that will enforce the mitigation measures identified the EIR, including the mitigation requirements of the Oil and Gas ERA. As a responsible agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CCR §15096). The District has reviewed the EIR prepared by Kern County, the Lead Agency for the project, and finds it to be adequate. To reduce project related impacts on air quality, the District evaluates emission controls for the project such as Best