



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JAN 08 2014



HEALTHY AIR LIVING™

Mr. Joey Barulich  
Vintage Production California, LLC  
9600 Ming Ave  
Bakersfield, CA 93311

**Re Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # S-1738  
Project # 1134305**

Dear Mr. Barulich

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. Vintage Production California, LLC (Vintage) has requested an Authority to Construct permit to increase a flare's daily heat input limit.

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,

David Warner  
Director of Permit Services

DW DT/st

Enclosures

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

**Seyed Sadredin**

Executive Director/Air Pollution Control Officer

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# San Joaquin Valley Air Pollution Control District

## Authority to Construct Application Review Flare

Facility Name	Vintage Production California, LLC	Date	12/24/13
Mailing Address	9600 Ming Ave Bakersfield, CA 93311	Engineer	David Torii
		Lead Engineer	Rich Karrs
Contact Person	Joey Barluich		
Telephone	661-869-8075		
Application #(s)	S-1738-455-2		
Project #	1134305		
Deemed Complete	11/27/13		

### I Proposal

Vintage Production California, LLC (Vintage) has requested an Authority to Construct (ATC) permit to increase flare S-1738-455's daily heat input limit

Vintage received their Title V Permit on 1/13/00. This modification can be classified as a Title V significant modification pursuant to Rule 2520 and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Vintage must apply to administratively amend their Title V permit.

### II Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
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 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4311	Flares (06/18/2009)
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 equipment is located in Vintage's Light Oil Western stationary source. 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**

Produced fluids from production wells enter either a three-phase separator or free-water-knockout vessel (FWKO), depending on the operational needs, and wash tank where the fluids are separated into produced water, crude oil, and natural gas streams. Water from the wash tank enters the produced water tank. Oil from the wash tank is sent to shipping tanks for storage prior to custody transfer or shipping via vacuum trucks. The wash tank and oil shipping tanks are served by a vapor control system venting to a sales gas pipeline or the subject sonic flare.

#### **V Equipment Listing**

##### Pre-Project Equipment Description (see PTO in Appendix B)

S-1738-455-0 750 BBL WASH TANK WITH VAPOR CONTROL SHARED WITH FIVE TANKS (S-1738-455 THROUGH '459) AND OIL/WATER SUMP S-1738-460 VENTED TO VAPOR CONTROL SYSTEM INCLUDING THREE PHASE SEPARATOR, FREE WATER KNOCK OUT, GAS SCRUBBER, SALES GAS SCRUBBER AND COMPRESSORS DISCHARGING INTO BLANKET GAS SYSTEM, SALES PIPELINE OR 256.3 MMBTU/HR GBA-CORONA-CSF SONIC FLARE

##### Proposed ATC

S-1738-455-2 MODIFICATION OF 750 BBL WASH TANK WITH VAPOR CONTROL SHARED WITH FIVE TANKS (S-1738-455 THROUGH '459) AND OIL/WATER SUMP S-1738-460 VENTED TO VAPOR CONTROL SYSTEM INCLUDING THREE PHASE SEPARATOR, FREE WATER KNOCK OUT, GAS SCRUBBER, SALES GAS SCRUBBER AND COMPRESSORS DISCHARGING INTO BLANKET GAS SYSTEM, SALES PIPELINE OR 256.3 MMBTU/HR GBA-CORONA-CSF SONIC FLARE INCREASE FLARE'S DAILY FLOW RATE LIMIT

##### Post Project Equipment Description

S-1738-455-2 750 BBL WASH TANK WITH VAPOR CONTROL SHARED WITH FIVE TANKS (S-1738-455 THROUGH '459) AND OIL/WATER SUMP S-1738-460 VENTED TO VAPOR CONTROL SYSTEM INCLUDING THREE PHASE SEPARATOR, FREE WATER KNOCK OUT, GAS SCRUBBER, SALES GAS SCRUBBER AND COMPRESSORS DISCHARGING INTO BLANKET GAS SYSTEM, SALES PIPELINE OR 256.3 MMBTU/HR GBA-CORONA-CSF SONIC FLARE

#### **VI Emission Control Technology Evaluation**

GBA-Corona CSF flares use the energy associated with pressurized gas to entrain and mix large quantities of air. The annulus design of the nozzle enhances the mixing rate of the entrained air into the primary mixing zone of flame. This highly aerated gas and air stream burns with a clean short flame.

#### **VII General Calculations**

## A Assumptions

- Pre-project maximum heat input limit = 6151 2 MMBtu/day and 81,600 MMBtu/yr
- Post-project maximum heat input limit = 10,080 MMBtu/day and 81,600 MMBtu/yr
- Waste gas heating value = 1200 Btu/scf

## B Emission Factors

Pre-Project and Post-Project Flare Emission Factors		
	lb/MMBtu	Source
NO <sub>x</sub>	0 068	FYI-83 and PTO
SO <sub>x</sub>	0 00858*	PTO
PM <sub>10</sub>	0 008	FYI-83 and PTO
CO	0 37	FYI-83 and PTO
VOC	0 063	FYI-83 and PTO

\*(3 0 gr S/100scf)(1 scf/1200 Btu)(1 lb/7000 gr)( 2 lb SO<sub>2</sub>/lb S)(10E6/MM)  
= 0 0071 lb-SO<sub>x</sub>/MMBtu

## C Calculations

### 1 Pre-Project Potential to Emit (PE1)

The potential to emit for the operation is calculated as follows, and summarized in the table below

$$\text{NO}_x \text{ } 0 \text{ } 068 \text{ lb/MMBtu} \times 6151 \text{ } 2 \text{ MMBtu/day} = 418 \text{ } 3 \text{ lb/day}$$

$$\text{NO}_x \text{ } 0 \text{ } 068 \text{ lb/MMBTU} \times 81,600 \text{ MMBtu/yr} = 5549 \text{ lb/yr}$$

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	418 3	5,549
SO <sub>x</sub>	52 8	700
PM <sub>10</sub>	49 2	653
CO	2275 9	30,192
VOC	387 5	5 141

### 2 Post Project Potential to Emit (PE2)

The potential to emit for the operation is calculated as follows, and summarized in the table below

$$\text{NO}_x \text{ } 0 \text{ } 068 \text{ lb/MMBtu} \times 10,080 \text{ MMBtu/day} = 685 \text{ } 4 \text{ lb/day}$$

$$\text{NO}_x \text{ } 0 \text{ } 068 \text{ lb/MMBTU} \times 81,600 \text{ MMBtu/yr} = 5549 \text{ lb/yr}$$

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	685.4	5,549
SO <sub>x</sub>	86.5	700
PM <sub>10</sub>	80.6	653
CO	3729.6	30,192
VOC	635.0	5,141

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

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants, therefore, SSPE1 calculations are not necessary

### **4 Post Project Stationary Source Potential to Emit (SSPE2)**

Since facility emissions are already above the Offset and Major Source Thresholds for all pollutants, SSPE2 calculations are not necessary

### **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

This source is an existing Major Source for all pollutants and will remain so. No change in other pollutants are proposed or expected as a result of this project.

#### **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)(i). Therefore the following PSD Major Source thresholds are applicable:

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase							>100,000
PSD Major Source Thresholds	250	250	250	250	250	250	100 000
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 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 a major source for all pollutants.

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application."

This emissions unit is equipped with sonic flare tip (equivalent to air assist), which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1 for all pollutants.

## 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 facility is a major source for all pollutants, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO <sub>x</sub>	5,549	50,000	N
SO <sub>x</sub>	700	80,000	N
PM <sub>10</sub>	653	30,000	N
VOC	5,141	50,000	N

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

## 8 Federal Major Modification

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

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

### Step 1

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

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

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

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation. If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period. The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete.

The applicant has provided the required historical and projected operation data (see Appendix C).

The project's combined total emission increases are calculated in Appendix D and 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 <sub>x</sub> *	347	0	Yes
VOC*	321	0	Yes
PM <sub>10</sub>	41	30,000	No
PM <sub>2.5</sub>	41	20,000	No
SO <sub>x</sub>	43	80,000	No

\*If there is any emission increases in NO<sub>x</sub> or VOC this project is a Federal Major Modification and no further analysis is required

Since there is an increase in NO<sub>x</sub> and VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>
- Greenhouse gases (GHG) CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, and SF<sub>6</sub>

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII C 5 of this document)

In this case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase

### I Project Location Relative to Class 1 Area

As demonstrated in the PSD Major Source Determination' Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km 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 Significance of Project Emission Increase Determination

#### a Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed



PSD Significant Emission Increase Determination Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	2.8	0.4	15.1	0.3	0.3	4774
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	n	n	n	n	n	n

$(81,600 \text{ MMBtu/yr})(117 \text{ lb-CO}_2\text{e/MMBtu})(\text{ton}/2000 \text{ lb}) = 4774 \text{ ton-CO}_2\text{e/yr}$

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

### 10 Quarterly Net Emissions Change (QNEC)

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

## VIII Compliance

### Rule 2201 New and Modified Stationary Source Review Rule

#### A Best Available Control Technology (BACT)

##### 1 BACT Applicability

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

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

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

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

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

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

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

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

$$AIPE = PE2 - HAPE$$

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)

$$HAPE = PE1 \times (EF2/EF1)$$

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

$$AIPE = PE2 - (PE1 \times (EF2 / EF1))$$

$$\text{Since } EF1 = EF2 \text{ AIPE} = PE2 - PE1$$

PE2				
	PE2	PE1	AIPE (PE2 – PE1)	BACT Triggered
NO <sub>x</sub>	685.4	418.3	267.1	Y
SO <sub>x</sub>	86.5	52.8	33.7	Y
PM <sub>10</sub>	80.6	49.2	31.4	Y
CO	3729.6	2275.9	1453.7	Y
VOC	635.0	387.5	247.5	Y

As demonstrated above, BACT is triggered for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC

**2 BACT Guideline**

BACT Guideline 1.4.2, applies to the waste gas flare [Waste Gas Flare - Incinerating Produced Gas] (See Appendix E)

**3 Top-Down BACT Analysis**

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

Pursuant to the attached Top-Down BACT Analysis (see Appendix E), BACT has been satisfied with the following

NO<sub>x</sub> sonic tip  
 SO<sub>x</sub> sonic tip  
 PM<sub>10</sub> pilot light fired solely on lpg or natural gas  
 CO sonic tip  
 VOC sonic tip

## 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 <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE2	>20,000	>54,750	>29,200	>200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	y	y	y	y	y

### 2 Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NO<sub>x</sub> and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project

The quantity of offsets in pounds per year for NO<sub>x</sub> 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

As calculated in Section VII C 6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit

Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions. Therefore offsets can be determined as follows

Offsets Required (lb/year) =  $([PE2 - PE1] + ICCE) \times DOR$

PE1 = PE2, therefore, Offsets Required = zero

As demonstrated above, the amount of offsets is zero. Therefore, offsets will not be required for this project

## **C Public Notification**

### **1 Applicability**

Public noticing is required for

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

#### **a New Major Sources, Federal Major Modifications, and SB 288 Major Modifications**

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

As demonstrated in Sections VII C 7 and VII C 8, this project does constitute a Federal Major Modification, therefore public noticing for 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 <sub>x</sub>	>20,000	>20,000	20,000 lb/year	No
SO <sub>x</sub>	>54,750	>54,750	54,750 lb/year	No
PM <sub>10</sub>	>29,200	>29,200	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

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

**d SSPE > 20,000 lb/year**

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

SSPE Public Notice Thresholds					
Pollutant	PE2 (lb/year)	PE1 (lb/year)	SSPE (lb/year)	SSPE Public Notice Threshold	Public Notice Required?
NO <sub>x</sub>	5,549	5,549	0	20,000 lb/year	No
SO <sub>x</sub>	700	700	0	20,000 lb/year	No
PM <sub>10</sub>	653	653	0	20,000 lb/year	No
CO	30,192	30,192	0	20,000 lb/year	No
VOC	5,141	5,141	0	20,000 lb/year	No

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

## 2 Public Notice Action

As discussed above, public noticing is required for this project triggering a Federal Major Modification. 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.

### Proposed Rule 2201 (DEL) Conditions

- VOC emission rate from vapor, light liquid, and light crude oil service components associated with wash tank, up to the tie-in with the vapor control trunk line shall not exceed 0.25 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the flare, gas scrubber, and blanket gas header shall not exceed 0.15 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the sales gas scrubber shall not exceed 0.15 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with the two 3 phase separators shall not exceed 0.67 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with tanks vapor control system and associated gas compressors shall not exceed 0.62 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with the sales gas pipeline and associated gas compressors shall not exceed 2.8 lb/day [District Rule 2201] N
- VOC emission rate from vapor, light liquid, and light crude oil components associated with flare, flare liquid knockout, and associated equipment shall not exceed 4.1 lb/day [District Rule 2201] N
- Maximum heat input shall not exceed 10,080 MMBtu/day nor 81,600 MMBtu/yr [District Rule 2201] N
- Emissions from the flare shall not exceed any of the following limits (based on total gas combusted) NO<sub>x</sub> (as NO<sub>2</sub>) 0.068 lb/MMBtu, PM<sub>10</sub> 0.008 lb/MMBtu, CO 0.37 lb/MMBtu, or VOC 0.063 lb/MMBtu [District Rule 2201] N

## **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 Rule 2201

### **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

- Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201] N
- {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request [District Rule 1070] N

#### 4 Reporting

No reporting is required to demonstrate compliance with Rule 2201

#### F Ambient Air Quality Analysis (AAQA)

Technical Services performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub> as well as a RMR. The emission rates used for criteria pollutant modeling were 1453 7 lb/day CO, 266 7 lb/day NO<sub>x</sub>, 33 7 lb/day SO<sub>x</sub>, and 31 4 lb/day PM<sub>10</sub>. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows

#### Criteria Pollutant Modeling Results\*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass <sup>2</sup>	X	Pass	X	X
NO <sub>x</sub>	Pass <sup>2</sup>	X	X	X	N/A <sup>3</sup>
SO <sub>x</sub>	Pass	Pass	X	Pass	N/A <sup>3</sup>
PM <sub>10</sub>	X	X	X	Pass <sup>2</sup>	N/A <sup>3</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>2</sup>	N/A <sup>3</sup>

\*Results were taken from the attached PSD spreadsheet

<sup>1</sup>The project was compared to the 1 hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures

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

<sup>3</sup>No annual increase in pollutants

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

#### 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. Corporation Vintage's compliance certification is included in Appendix F.

#### H Alternate Siting Analysis

Since the project will provide flaring capacity to be used at the same locations, the existing sites 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 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."

Section 3 20 2 states that a minor permit modifications are not Title I modifications (Federal Major Modifications) as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act. This project is a Federal Major Modification, consequently, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3 29.

## **Rule 4001 New Source Performance Standards (NSPS)**

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR), and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to produced gas-fired flares.

## **Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)**

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR, and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to flare operations.

## **Rule 4101 Visible Emissions**

Rule 4101 states 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 as dark as, or darker than, Ringelmann 1 or 20% opacity.

The flare is equipped with air assist and is expected to continue to operate without visible emissions dark as, or darker than, Ringelmann 1 or 20% opacity as stated in the following ATC condition:

- 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 as dark as or darker than, Ringelmann 1 or 20% opacity [District Rule 4101]

## **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 (**Appendix G**), 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

<b>RMR Summary</b>			
<b>Categories</b>	<b>Waste Gas Flare (Unit 455-2)</b>	<b>Project Totals</b>	<b>Facility Totals</b>
<b>Prioritization Score</b>	0.12	0.12	>1.0
<b>Acute Hazard Index</b>	0.002	0.002	0.47
<b>Chronic Hazard Index</b>	N/A <sup>1</sup>	N/A <sup>1</sup>	0.07
<b>Maximum Individual Cancer Risk (10<sup>-6</sup>)</b>	N/A <sup>1</sup>	N/A <sup>1</sup>	6.51E-06
<b>T-BACT Required?</b>	No		
<b>Special Permit Conditions?</b>	Yes		

<sup>1</sup>The Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since there was no increase in annual throughput.

### 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.

### Rule 4201 Particulate Matter Concentration

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

The concentration of particulate matter in the flare's exhaust can be calculated given the following data:

F-Factor for Flared Gas	8,604 dscf/MMBtu at 60 °F
PM <sub>10</sub> Emission Factor	0.008 lb-PM <sub>10</sub> /MMBtu
Percentage of PM as PM <sub>10</sub> in Exhaust	100%
Exhaust Oxygen (O <sub>2</sub> ) Concentration	3%
Excess Air Correction to F Factor	= 20.9 - (20.9 - 3) = 1.17

$$\frac{\left( \frac{0.008 \text{ lb PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb}} \right)}{\frac{8,604 \text{ ft}^3}{\text{MMBtu}} \times 1.17} = 0.006 \frac{\text{grain PM}}{\text{ft}^3}$$

Since 0.006 grain/dscf is less than 0.1 grain/dscf, compliance with District Rule 4201 is expected and the following condition will be listed on the flare's permit to ensure compliance.

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration.  
[District Rule 4201]

### **Rule 4301 Fuel Burning Equipment**

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas and LPG combustion are less than 1 µm in diameter.

The following table compares the Flare's emissions with Rule 4301 limits.

Rule 4301 Limits			
Pollutant	Flare Emissions (lb/hr)	Rule 4301 Limits (lb/hr)	Compliant?
NO <sub>2</sub>	28.6	140	Yes
SO <sub>2</sub>	3.6	200	Yes
Total PM	3.3	200	Yes

Since none of the Rule 4301 limits are exceeded, compliance with Rule 4301 is expected. Since the proposed emission limits already placed on the flare permit are much more stringent, no additional conditions will be listed.

### **Rule 4311 Flares**

The current PTO and ATC include conditions ensuring compliance with the rule and operational standards of subpart CFR 40 Subpart 60.18. This project is not expected to affect the compliance status. Continuous compliance is expected.

### **Rule 4801 Sulfur Compounds**

The rule limits sulfur compound emission (as SO<sub>x</sub>) concentrations to no more than 2000 ppmv, measured at the point of discharge. The flare is currently operating in compliance with the rule. Continuous compliance 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**

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

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

### **District CEQA Findings**

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

## **IX Recommendation**

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-1738-455-2 subject to the permit conditions on the attached draft ATC in Appendix H.

## **X Billing Information**

<b>Annual Permit Fees</b>			
<b>Permit Number</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Annual Fee</b>
S-1738-455-2	3020-02 H	256.3 MMBtu/hr	\$1030

## **APPENDIX A**

### **Quarterly Net Emissions Change (QNEC)**

## 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:

$QNEC = PE2 - PE1$ , where

$QNEC$  = Quarterly Net Emissions Change for each emissions unit, lb/qtr

$PE2$  = Post Project Potential to Emit for each emissions unit, lb/qtr

$PE1$  = Pre-Project Potential to Emit 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  $PE1$  can be calculated as follows:

$PE2_{\text{quarterly}} = PE2_{\text{annual}} - 4 \text{ quarters/year}$

$PE1_{\text{quarterly}} = PE1_{\text{annual}} - 4 \text{ quarters/year}$

$PE1 = PE2$ , therefore,  $QNEC = \text{zero}$

Permit # S 1738-455-2	Last Updated
Facility VINTAGE	12/24/2013 TORID
PRODUCTION CALIFORNIA	

Equipment Pre-Baselined NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr)	5549 0	700 0	653 0	30192 0	5141 0
Daily Emis Limit (lb/Day)	685 4	86 5	80 6	3729 6	387 5
Quarterly Net Emissions Change (lb/Qtr)					
Q1	0 0	0 0	0 0	0 0	0 0
Q2	0 0	0 0	0 0	0 0	0 0
Q3	0 0	0 0	0 0	0 0	0 0
Q4	0 0	0 0	0 0	0 0	0 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					

**APPENDIX B**  
**Current PTO**

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT S-1738-455 0

EXPIRATION DATE 02/28/2014

SECTION SE12 TOWNSHIP 29S RANGE 21E

## EQUIPMENT DESCRIPTION

750 BBL WASH TANK WITH VAPOR CONTROL SHARED WITH FIVE TANKS (S-1738-455 THROUGH '459) AND OIL/WATER SUMP S 1738-460 VENTED TO VAPOR CONTROL SYSTEM INCLUDING THREE PHASE SEPARATOR FREE WATER KNOCK OUT GAS SCRUBBER, SALES GAS SCRUBBER AND COMPRESSORS DISCHARGING INTO BLANKET GAS SYSTEM, SALES PIPELINE OR 256 3 MMBTU/HR GBA CORONA CSF SONIC FLARE

## PERMIT UNIT REQUIREMENTS

- 1 The tank shall be equipped with a fixed roof with no holes or openings [District Rules 2201 and 4623]
- 2 The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO approved and maintained in gas-tight condition. Collected vapors shall be directed to a gas pipeline or flare with a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6 4 6 [District Rules 2201 & 4623, 5 6 1]
- 3 The tank vapor recovery system also serves permit exempt casing gas collection system serving non-thermally enhanced wells [District Rule 2201]
- 4 Except as otherwise provided in this permit, operator shall ensure that the vapor control system is functional and is operating as designed at all times [District Rule 2201]
- 5 No air contaminant shall be released into the atmosphere which causes a public nuisance [District Rule 4102]
- 6 Wash tank, 3 phase separators, gas scrubber, and sales gas scrubber shall vent to low use flare sales gas line or gas blanketing system [District NSR Rule]
- 7 VOC emission rate from vapor, light liquid, and light crude oil service components associated with wash tank, up to the tie-in with the vapor control trunk-line, shall not exceed 0 25 lb/day [District Rule 2201]
- 8 VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the flare, gas scrubber, and blanket gas header shall not exceed 0 15 lb/day [District Rule 2201]
- 9 VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the sales gas scrubber shall not exceed 0 15 lb/day [District Rule 2201]
- 10 VOC emission rate from vapor, light liquid, and light crude oil components associated with the two 3 phase separators shall not exceed 0 67 lb/day [District Rule 2201]
- 11 VOC emission rate from vapor, light liquid, and light crude oil components associated with tanks vapor control system and associated gas compressors shall not exceed 0 62 lb/day [District Rule 2201]
- 12 VOC emission rate from vapor, light liquid, and light crude oil components associated with the sales gas pipeline and associated gas compressors shall not exceed 2 8 lb/day [District Rule 2201]
- 13 VOC emission rate from vapor, light liquid, and light crude oil components associated with flare, flare liquid knockout, and associated equipment shall not exceed 4 1 lb/day [District Rule 2201]
- 14 VOC content of hydrocarbons in vapor collection piping serving the wash tank and all associated vessels and systems shall not exceed 65% by weight [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



- 15 VOC content of gas shall be determined at startup and annually thereafter by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval [District Rule 2201]
- 16 There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with wash tank, 3-phase separators, gas scrubber and blanket header, sales gas scrubber, and vapor control system (with compressor) [District Rule 2201]
- 17 Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from wash tank, 3 phase separators, gas scrubber and blanket header, sales gas scrubber, and vapor control system (with compressor) calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors with 100% VOC content in components [District Rule 2201]
- 18 Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from low use flare and flare liquid knockout calculated using EPA Document Table 2-4 Oil and Gas Production Operations Average Value Ranges Emission Factors [District Rule 2201]
- 19 The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99% [District Rules 2201 and 4623]
- 20 Except during tank cleaning, tank roof appurtenances shall be maintained leak free [District Rule 4623]
- 21 Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak free condition [District Rule 4623, 5 6 3]
- 22 A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10 000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21 [District Rule 4623, 3 9 and 6 4 8]
- 23 Any tank gauging or sampling device on a tank vented to the vapor control system shall be equipped with a leak free cover which shall be closed at all times except during gauging or sampling [District Rule 4623, 5 6 2]
- 24 To avoid the potential unsafe conditions associated with heat radiation from an ignited flare, all fugitive components, such as pipe connections, fittings, and valves, associated with the low use flare shall be inspected only during maintenance or other times when the flare is offline and flare pilot are not lit. These components shall be inspected by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit [District Rule 4623, 5 7 (Table 3)]
- 25 During a District inspection, fugitive components, such as pipe connections, fittings, and valves, associated with the low use flare that are found to leak will not be a violation of this permit provided the facility records, tags, and repairs leaks to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period [District Rule 2201]
- 26 All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit [District Rule 4623, 5 7 (Table 3)]
- 27 If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition [District Rule 4623, 5 7 (Table 3)]
- 28 Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall (a) eliminate or minimize the leak within 8 hours after detection, (b) if the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices and eliminate the leak within 48 hours after detection. In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection [District Rule 4623, 5 7 9 (Table 3)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility wide Permit to Operate

- 29 Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623 [District Rule 4623, 5 7 (Table 3)]
- 30 If a component type is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections [District Rule 4623, 5 7 (Table 3)]
- 31 Any component affixed to the tank or within 5 feet of the tank that is found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program [District Rule 4623, 5 7 (Table 3)]
- 32 Operator shall maintain an inspection log containing the following: 1) type of component leaking, 2) date and time of leak detection, and method of detection, 3) date and time of leak repair, and emission level of recheck after leak is repaired, 4) method used to minimize the leak to lowest possible level within 8 hours after detection [District Rule 1070]
- 33 The operator shall maintain a copy of the latest APCO approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request [District Rule 4409]
- 34 By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP [District Rule 4409]
- 35 In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409 [District Rule 4409]
- 36 The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types, 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found, 3) Date of the leak detection and method of the leak detection, 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) The date of repair, replacement, or removal from operation of the leaking component(s), 6) The identification 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 first, 7) The method(s) 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, 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, 9) The inspector's name, business mailing address, and business telephone number [District Rule 4409, 6.2.1]
- 37 Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request [District Rule 4409, 6.2.2]
- 38 Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration [District Rule 4409, 6.2.3]
- 39 The efficiency of any VOC destruction device shall be measured by EPA Method 25, 25a, or 25b [District Rule 4623, 6.4.7]
- 40 This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance but occurs as a routine maintenance activity [District Rule 2020]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

- 41 Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Rule 4623 Section 5.7 [District Rule 4623, 5.7]
- 42 Permittee shall keep in their facility at all times a copy of the letter sent to the APCO requesting participation in the Rule 4623 Fixed Roof Tank Preventive Inspection and Maintenance Program, and Tank Interior Cleaning Program, and maintain the records of annual tank inspections, maintenance, and cleaning to document the participation in the program [District Rule 4623, 5.7]
- 43 A flame shall be present at all times when combustible gases are vented through flare [District Rule 2201]
- 44 Sulfur compound concentration of gas combusted shall not exceed 3.0 gr S/100 scf (50.7 ppmv H<sub>2</sub>S) [District Rule 2201]
- 45 Flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour [District Rules 2201]
- 46 Flare shall be equipped with total gas volume flow measuring system [District Rule 2201]
- 47 Maximum heat input shall not exceed 6151.2 MMBtu/day nor 81,600 MMBtu/yr [District Rule 2201]
- 48 Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO<sub>x</sub> (as NO<sub>2</sub>) 0.068 lb/MMBtu, PM<sub>10</sub> 0.008 lb/MMBtu, CO 0.37 lb/MMBtu, or VOC 0.063 lb/MMBtu [District Rule 2201]
- 49 Permittee shall measure sulfur content of gas incinerated in flare within 60 days of startup [District Rules 2201 and 4801]
- 50 Operator shall conduct quarterly sampling of the sulfur content of the gas flared. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually [District Rule 2201]
- 51 Permittee shall determine sulfur content of gas flared using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days [District Rule 1081 and 2201]
- 52 The higher heating value of the flared gas shall be monitored at least quarterly [District Rules 1070 and 2201]
- 53 Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits [District Rule 2201]
- 54 Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr [District Rule 2201]
- 55 All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request [District Rule 1070]

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

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## **Appendix C**

### **Baseline Actual Emissions and Projected Actual Emissions**

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**From** Barulich, Joey A  
**Sent** Thursday, November 14, 2013 2:36 PM  
**To** David Tori  
**Cc** Barulich, Joey A  
**Subject** S-1738-455 Flare Volumes

David

Following up on our telephone conversation this morning, below are the flare volumes for 2012 and 2013 and the expected flare volume going forward. Please let me know if you need more information or have any questions.

Year	Hrs On	MMCF Flared
2012	zero	zero
2013 (ytd)	9	1.5 (one million five hundred thousand standard cubic feet)
2014 > 10		5.0 (five million standard cubic feet)

Thanks,  
Joey

Joey Barulich  
HES Consultant  
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(661) 869-8075 Office  
(661) 869 8170 - Fax  
(661) 979-0228 - Cell  
[joey\\_barulich@oxy.com](mailto:joey_barulich@oxy.com)

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## **Appendix D**

# **Federal Major Modification Emission Increase Calculations**

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

Where PAE = Projected Actual Emissions, and  
BAE = Baseline Actual Emissions

Baseline Gas Flared		
	Gas Flared MMscf/yr	Source
2012	0	applicant
2013	1.5	applicant
Average Baseline Gas Flared per year	0.75	$(0.75)(1200 \text{ MMBtu/scf}) = 900 \text{ MMBtu/yr}$

Projected Gas Flared = 5.0 MMscf/yr (per applicant)

Projected Gas Flared	
Projected Gas Flared (MMscf/yr)	MMBtu/yr
5.0	$(5.0)(1200 \text{ MMBtu/scf}) = 6000$

Emission Increase					
	lb/MMBtu	BAE (lb/year)	PAE (lb/year)	PAE – BAE (lb/yr)	PAE – BAE (ton/yr)
NO <sub>x</sub>	0.068	61	408	347	0.2
SO <sub>x</sub>	0.00858	8	51	43	0.0
PM <sub>10</sub>	0.008	7	48	41	0.0
CO	0.37	333	2,220	1,887	0.9
VOC	0.063	57	378	321	0.2
CO <sub>2</sub> e	117.0	52	351	299	299

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## **APPENDIX E**

### **BACT Analysis**



**Best Available Control Technology (BACT ) Guideline 1.4.2**  
**Last Update: 12/31/1998**

**Waste Gas Flare - Incinerating Produced Gas**

<b>Pollutant</b>	<b>Achieved in Practice or in the SIP</b>	<b>Technologically Feasible</b>	<b>Alternate Basic Equipment</b>
CO	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
NOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
PM10	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.		
SOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.	Precombustion SOx scrubbing system (non-emergency flares only.)	
VOC	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		

## **BACT Analyses for NO<sub>x</sub>, CO and VOC Emissions**

### **NO<sub>x</sub>, CO and VOC**

#### **a Step 1 - Identify all control technologies**

The SJVUAPCD BACT Clearinghouse Guideline 142 (current version), identifies Achieved in Practice BACT for NO<sub>x</sub> CO and VOC from Waste Gas Flare – Incinerating Produced Gas as steam assisted, air assisted or Coanda effect when steam is unavailable

#### **b Step 2 - Eliminate technologically infeasible options**

Steam is not available at the site Therefore steam assisted flare is not technologically feasible

#### **c Step 3 - Rank remaining options by control effectiveness**

Air assisted, or Coanda effect flare

#### **d Step 4 - Cost effectiveness analysis**

The flare is equipped with a sonic flare tip which is equivalent to air assist, therefore, a cost effectiveness analysis is not required

#### **e Step 5 - Select BACT**

sonic flare tip

### **PM<sub>10</sub> and SO<sub>x</sub>**

#### **a Step 1 - Identify all control technologies**

The SJVUAPCD BACT Clearinghouse Guideline 142 (current version), identifies Achieved in Practice BACT for PM<sub>10</sub> from Waste Gas Flare – Incinerating Produced Gas as steam assisted, air assisted or Coanda effect when steam is unavailable Pilot Light Fired Solely on LPG or Natural Gas

#### **b Step 2 - Eliminate technologically infeasible options**

Steam is not available at the site Therefore steam assisted flare is not technologically feasible

#### **c Step 3 - Rank remaining options by control effectiveness**

Air assisted, or Coanda-effect flare Pilot light fired solely on LPG or natural gas (Achieved-in-Practice) Pilot Light Fired Solely on LPG or Natural Gas

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**d Step 4 - Cost effectiveness analysis**

The flare is equipped with a sonic flare tip which is equivalent to air assist and uses natural gas pilot fuel, therefore, a cost effectiveness analysis is not required

**e Step 5 - Select BACT**

The flare is equipped with sonic flare tip and pilot light fired solely on natural gas, therefore, BACT is satisfied

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## **APPENDIX F**

### **Compliance Certification**

## CERTIFICATION

Vintage Production California LLC (VPC) hereby certifies as follows

- 1 VPC owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to VPC stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of Vintage Inc.'s other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).
- 2 Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by VPC in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.
- 3 This certification is made on information and belief and is based upon a review of VPC's major stationary sources in the State of California by those employees of VPC who have operational responsibility for compliance. In conducting such reviews, VPC and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.
- 4 This certification shall speak as of the time and date of its execution.

### CERTIFICATION

By  Date 12-4-2013  
Title Operations Lead Time 4:00 PM

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**APPENDIX G**  
**HRA and AAQA**

## San Joaquin Valley Air Pollution Control District Risk Management Review

To David Torii – Permit Services  
From Ester Davila – Technical Services  
Date December 26, 2013  
Facility Name Vintage Production CA LLC  
Location Light Oil Western  
Application #(s) S-1738-455-2  
Project # S-1134305

### A RMR SUMMARY

RMR Summary			
Categories	Waste Gas Flare (Unit 455 2)	Project Totals	Facility Totals
Prioritization Score	0 12	0 12	>1 0
Acute Hazard Index	0 002	0 002	0 47
Chronic Hazard Index	N/A <sup>1</sup>	N/A <sup>1</sup>	0 07
Maximum Individual Cancer Risk (10 <sup>-6</sup> )	N/A <sup>1</sup>	N/A <sup>1</sup>	6 51E-06
T-BACT Required?	No		
Special Permit Conditions?	Yes		

<sup>1</sup>The Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since there was no increase in annual throughput

### Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels, the following permit conditions must be included for

#### Unit # 455-2

- 1 The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction [District Rule 4102]

## B RMR REPORT

### I Project Description

Technical Services received a request on December 26, 2013, to perform an Ambient Air Quality Analysis and a Risk Management Review for an increase in flare S-1739-455's daily throughput. There is no increase in the annual throughput.

### II Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Stack parameters were calculated utilizing District Approved FYI 69 Memo for Flare Modeling. Emissions calculated using emission factors for Waste Gas Flare were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2004-2008 from Missouri Triangle to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 455 2			
Source Type	Point	Location Type	Rural
Stack Height (m)	12.52	Closest Receptor (m)	305
Stack Diameter (m)	0.98	Type of Receptor	Residential/ Business
Stack Exit Velocity (m/s)	20	Max Hours per Year	8760
Stack Exit Temp (°K)	1273	Fuel Type	Waste gas

Technical Services performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>, as well as a RMR. The emission rates used for criteria pollutant modeling were 1453.7 lb/day CO, 266.7 lb/day NO<sub>x</sub>, 33.7 lb/day SO<sub>x</sub>, and 31.4 lb/day PM<sub>10</sub>. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:



## Criteria Pollutant Modeling Results\*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO <sub>x</sub>	Pass	X	X	X	N/A <sup>3</sup>
SO <sub>x</sub>	Pass	Pass	X	Pass	N/A <sup>3</sup>
PM <sub>10</sub>	X	X	X	Pass <sup>2</sup>	N/A <sup>3</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>2</sup>	N/A <sup>3</sup>

\*Results were taken from the attached PSD spreadsheet

<sup>1</sup>The project was compared to the 1 hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12 2010 using the District's approved procedures

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

<sup>3</sup>No annual increase in pollutants

### III Conclusion

There is no increase in annual usage, therefore there is no Chronic Hazard Index or Cancer Risk associated with the project and the Acute Hazard Index is 0.002, which is below 1.0. In accordance with the District's Risk Management Policy, the unit is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels, the permit conditions listed on Page 1 of this report must be included for this permit unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

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

### IV Attachments

- A RMR request from the project engineer
- B Additional information from the applicant/project engineer
- C Toxic emissions summary
- D Prioritization score
- E HARP Report
- F AAQA Report
- G Facility Summary

[illegible]

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

PERMIT NO S-1738-455 2

LEGAL OWNER OR OPERATOR VINTAGE PRODUCTION CALIFORNIA LLC  
MAILING ADDRESS 9600 MING AVE SUITE 300  
BAKERSFIELD, CA 93311

LOCATION LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

SECTION SE12 TOWNSHIP 29S RANGE 21E

**EQUIPMENT DESCRIPTION**

MODIFICATION OF 750 BBL WASH TANK WITH VAPOR CONTROL SHARED WITH FIVE TANKS (S-1738-455 THROUGH -459) AND OIL/WATER SUMP S-1738-460 VENTED TO VAPOR CONTROL SYSTEM INCLUDING THREE PHASE SEPARATOR FREE WATER KNOCK OUT GAS SCRUBBER SALES GAS SCRUBBER AND COMPRESSORS DISCHARGING INTO BLANKET GAS SYSTEM SALES PIPELINE OR 256 3 MMBTU/HR GBA-CORONA-CSF SONIC FLARE INCREASE FLARE'S DAILY FLOW RATE LIMIT

**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 The tank shall be equipped with a fixed roof with no holes or openings [District Rules 2201 and 4623]
- 4 The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device The vapor recovery system shall be APCO approved and maintained in gas tight condition Collected vapors shall be directed to a gas pipeline or flare with a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6 4 6 [District Rules 2201 & 4623, 5 6 1]

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

DAVID WARNER Director of Permit Services

S-1738-455-2 Dec 24 2013 7:28AM - TORID Joint Inspection NOT Req 1 ed

Southern Regional Office • 34946 Flyover Court • Bakersfield CA 93308 • (661) 392 5500 • Fax (661) 392 5585

- 5 The tank vapor recovery system also serves permit-exempt casing gas collection system serving non thermally enhanced wells [District Rule 2201]
- 6 Except as otherwise provided in this permit, operator shall ensure that the vapor control system is functional and is operating as designed at all times [District Rule 2201]
- 7 {98} No air contaminant shall be released into the atmosphere which causes a public nuisance [District Rule 4102]
- 8 Wash tank, 3 phase separators, gas scrubber, and sales gas scrubber shall vent to low use flare, sales gas line or gas blanketing system [District NSR Rule]
- 9 VOC emission rate from vapor, light liquid, and light crude oil service components associated with wash tank, up to the tie-in with the vapor control trunk-line, shall not exceed 0.25 lb/day [District Rule 2201]
- 10 VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the flare, gas scrubber, and blanket gas header shall not exceed 0.15 lb/day [District Rule 2201]
- 11 VOC emission rate from vapor, light liquid, and light crude oil components associated with vapor control piping to the sales gas scrubber shall not exceed 0.15 lb/day [District Rule 2201]
- 12 VOC emission rate from vapor, light liquid and light crude oil components associated with the two 3 phase separators shall not exceed 0.67 lb/day [District Rule 2201]
- 13 VOC emission rate from vapor light liquid, and light crude oil components associated with tanks vapor control system and associated gas compressors shall not exceed 0.62 lb/day [District Rule 2201]
- 14 VOC emission rate from vapor, light liquid and light crude oil components associated with the sales gas pipeline and associated gas compressors shall not exceed 2.8 lb/day [District Rule 2201]
- 15 VOC emission rate from vapor, light liquid, and light crude oil components associated with flare, flare liquid knockout, and associated equipment shall not exceed 4.1 lb/day [District Rule 2201]
- 16 VOC content of hydrocarbons in vapor collection piping serving the wash tank and all associated vessels and systems shall not exceed 65% by weight [District Rule 2201]
- 17 VOC content of gas shall be determined at startup and annually thereafter by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval [District Rule 2201]
- 18 There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with wash tank, 3-phase separators, gas scrubber and blanket header, sales gas scrubber and vapor control system (with compressor) [District Rule 2201]
- 19 Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from wash tank, 3-phase separators, gas scrubber and blanket header, sales gas scrubber, and vapor control system (with compressor) calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV 2C Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors with 100% VOC content in components [District Rule 2201]
- 20 Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from low use flare and flare liquid knockout calculated using EPA Document Table 2-4 Oil and Gas Production Operations Average Value Ranges Emission Factors [District Rule 2201]
- 21 The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99% [District Rules 2201 and 4623]
- 22 Except during tank cleaning, tank roof appurtenances shall be maintained leak free [District Rule 4623]
- 23 Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak free condition [District Rule 4623, 5.6.3]
- 24 A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21 [District Rule 4623, 3.9 and 6.4.8]

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CONDITIONS CONTINUE ON NEXT PAGE

- 25 Any tank gauging or sampling device on a tank vented to the vapor control system shall be equipped with a leak free cover which shall be closed at all times except during gauging or sampling [District Rule 4623, 5 6 2]
- 26 To avoid the potential unsafe conditions associated with heat radiation from an ignited flare, all fugitive components, such as pipe connections, fittings, and valves, associated with the low use flare shall be inspected only during maintenance or other times when the flare is offline and flare pilot are not lit. These components shall be inspected by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit [District Rule 4623, 5 7 (Table 3)]
- 27 During a District inspection, fugitive components, such as pipe connections, fittings, and valves, associated with the low use flare that are found to leak will not be a violation of this permit provided the facility records, tags, and repairs leaks to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period [District Rule 2201]
- 28 All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit [District Rule 4623, 5 7 (Table 3)]
- 29 If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition [District Rule 4623, 5 7 (Table 3)]
- 30 Upon detection of any leaking components (having a gas leak >10,000 ppmv measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall (a) eliminate or minimize the leak within 8 hours after detection, (b) if the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices and eliminate the leak within 48 hours after detection. In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection [District Rule 4623, 5 7 9 (Table 3)]
- 31 Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623 [District Rule 4623, 5 7 (Table 3)]
- 32 If a component type is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections [District Rule 4623, 5 7 (Table 3)]
- 33 Any component affixed to the tank or within 5 feet of the tank that is found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program [District Rule 4623, 5 7 (Table 3)]
- 34 Operator shall maintain an inspection log containing the following: 1) type of component leaking, 2) date and time of leak detection, and method of detection, 3) date and time of leak repair, and emission level of recheck after leak is repaired, 4) method used to minimize the leak to lowest possible level within 8 hours after detection [District Rule 1070]
- 35 {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request [District Rule 4409]
- 36 {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP [District Rule 4409]
- 37 {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4 1 and 4 2 of Rule 4409 [District Rule 4409]

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CONDITIONS CONTINUE ON NEXT PAGE

- 38 {3472} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types, 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found, 3) Date of the leak detection and method of the leak detection, 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) The date of repair, replacement, or removal from operation of the leaking component(s), 6) The identification 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 first, 7) The method(s) 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, 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, 9) The inspector's name, business mailing address, and business telephone number [District Rule 4409, 6 2 1]
- 39 {3473} Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request [District Rule 4409, 6 2 2]
- 40 {3474} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration [District Rule 4409, 6 2 3]
- 41 The efficiency of any VOC destruction device shall be measured by EPA Method 25, 25a, or 25b [District Rule 4623, 6 4 7]
- 42 This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance but occurs as a routine maintenance activity [District Rule 2020]
- 43 Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Rule 4623 Section 5 7 [District Rule 4623, 5 7]
- 44 Permittee shall keep in their facility at all times a copy of the letter sent to the APCO requesting participation in the Rule 4623 Fixed Roof Tank Preventive Inspection and Maintenance Program, and Tank Interior Cleaning Program, and maintain the records of annual tank inspections, maintenance, and cleaning to document the participation in the program [District Rule 4623, 5 7]
- 45 A flame shall be present at all times when combustible gases are vented through flare [District Rule 2201]
- 46 Sulfur compound concentration of gas combusted shall not exceed 3 0 gr S/100 scf (50 7 ppmv H<sub>2</sub>S) [District Rule 2201]
- 47 Flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour [District Rules 2201]
- 48 Flare shall be equipped with total gas volume flow measuring system [District Rule 2201]
- 49 Maximum heat input shall not exceed 10,080 MMBtu/day nor 81,600 MMBtu/yr [District Rule 2201]
- 50 Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO<sub>x</sub> (as NO<sub>2</sub>) 0 068 lb/MMBtu, PM<sub>10</sub> 0 008 lb/MMBtu, CO 0 37 lb/MMBtu, or VOC 0 063 lb/MMBtu [District Rule 2201]
- 51 Permittee shall measure sulfur content of gas incinerated in flare within 60 days of startup [District Rules 2201 and 4801]
- 52 Permittee shall determine sulfur content of gas flared using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days [District Rule 1081 and 2201]
- 53 The higher heating value of the flared gas shall be monitored at least quarterly [District Rules 1070 and 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

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- 54 Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits [District Rule 2201]
- 55 Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr [District Rule 2201]
- 56 {3246} All records shall be maintained and retained on site for a period of at least 5 years and shall be made available for District inspection upon request [District Rule 1070]

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