



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

MAR 12 2014

Mr. John Ludwick
Aera Energy LLC
PO Box 11164
Bakersfield, CA 93389-1164

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1547 and S-1548
Project # 1133652 and 1133661

Dear Mr. Ludwick:

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 installation of a 6,500 gallon chemical storage tank to be permitted in both S-1547 and S-1548 and resulting in an increase of 1512 lb VOC/yr.

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:RUE/st

Enclosures

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

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Chemical Storage Tank and Loadout Operation

Facility Name: Aera Energy LLC	Date: March 6, 2014
Mailing Address: PO Box 11164	Engineer: Richard Edgehill
Bakersfield, CA 93389-1164	Lead Engineer: Allan Phillips
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Application #(s): S-1547-1337-0, S-1548-621-0	
Project #: 1133652(S-1547), 1133661(S-1548)	
Deemed Complete: February 11, 2014	

I. Proposal

Aera Energy LLC (Aera) has requested an Authority to Construct (ATC) for the installation of a 6,500 gallon chemical storage tank and liquid loadout operation. The tank will be used to store chemicals for the treatment of produced fluids from Aera's light and heavy oil western stationary sources and therefore will be permitted in both facilities S-1547 and S-1548.

The project results in an increase in VOC emissions triggering BACT, offsets and public notice (Federal Major Modification).

Aera facilities S-1547 and S-1548 operate under Title V Permits. The project is a Federal Major Modification and, therefore, it 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). 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. VPC must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 2530	Federally Enforceable Potential to Emit
Rule 2410	Prevention of Significant Deterioration (Adopted 6/16/11, effective 11/26/12)
Rule 4001	New Source Performance Standards (4/14/99) – not applicable - Subpart Kb applies to storage vessels 75 m ³ (19,800 gallons) or greater. Storage tank has a capacity of 6,500 gallons; therefore, this rule does not apply.

Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04) – **not applicable** - The facility is not a Major HAP Source. Therefore, the requirements of this regulation do not apply.

Rule 4101 Visible Emissions (04/20/05)

Rule 4102 Nuisance (12/17/92)

Rule 4623 Storage of Organic Liquids (05/19/05)

Rule 4624 Transfer of Organic Liquid (12/20/07) – **exempt** – less than 4,000 gal/day loaded out, unloading by vacuum truck equipped with pump is exempt (please see Process Description)

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 chemical storage tank will be located within both the light oil and heavy oil stationary sources at Dehy 20 Section 20, T28S, R21E which is not 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

The tank will be used to store chemicals used to treat production from Aera's heavy and light oil source. Liquid will be pumped out to trucks. Unloading of liquid into the tank will be done using vacuum trucks equipped with pumps. Unloading is not permit exempt (not crude oil, asphalt, or residual oil) but is exempt from Rule 4624 (Section 4.5) see relevant Rule sections below. Therefore, disconnect emissions associated with unloading are included in project emissions.

Rule 2020 Exemption

Section 6.7.1.3 Attached to an organic material delivery vehicle and used exclusively for the transfer of crude oil, asphalt, or residual oil.

Rule 4624

Section 4.5 Except for the one-time record submission requirement of Section 6.1.5 for vacuum truck operators, the requirements of this rule shall not apply to transfer operations involving vacuum trucks.

A process diagram is included in **Attachment I**.

V. Equipment Listing

S-1548-621-0: 6500 GALLON CHEMICAL STORAGE TANK WITH P/V VALVE AND LIQUID LOADOUT OPERATION

S-1547-1337-0: 6500 GALLON CHEMICAL STORAGE TANK WITH P/V VALVE AND LIQUID
LOADOUT OPERATION

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.

VII. General Calculations

A. Assumptions

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year
- The tank will store WCI A180C Corrosion Inhibitor (MSDS)
- Facility emits only VOCs
- The tanks emit only volatile organic compounds (VOCs),
- TVP of liquid = 0.6 psia (Applicant)
- Tank temperature, 100° F
- Tank throughput, 6,500 gal/day (1 turnover/day, 365 turnovers/yr)
- Loadout Throughput, 2,500 gal/day
- VOCs molecular weight, 100 lb/lbmol (District standard, not provided on MSDS)
- Liquid density: 1 g/ml (MSDS)
- Maximum number of disconnects (unloading and load-out): 8/day (applicant)
- Volume of spills from disconnects, 10 mL
- VOC content of spilled oil, 100% and all evaporates

B. Emission Factors

VOC emissions from the tanks are calculated using EPA Tanks 4.0. Input and output parameters are listed on the spreadsheet in **Attachment II**.

Loading Emissions

The emissions from the loading rack were estimated using the following equation AP-42 (A Compilation of Air Pollutant Emission Factors, January 1995), Section 5.2.2.1.1 (**Attachment III**):

$$LL = 12.46 * S * P * M * (1/T) * (1 - (eff/100))$$

Where LL = loading loss, pounds per 10³ gallons of liquid loaded

S = a saturation factor. 0.5 (submerged loading of clean cargo tank)

P = true vapor pressure of liquid loaded, 0.6 psia

T = temperature of liquid loaded, 520 °R

M = molecular weight of vapors, 100 lb/lb-mole

eff = overall vapor capture and control efficiency, 0 %

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

The results of the tank emissions calculations are included in **Attachment II**.

Tank Emissions

VOCs: 2.2 lb/day, 791 lb/yr

Loadout Emissions

$12.46 \times 0.5 \times 0.6 \times 100 / 520 \times 2.5 = 1.8$ lb/day, 657 lb/yr

Disconnect Emissions

$(10 \text{ ml/leak})(1.0 \text{ g/mL})(\text{lb}/454 \text{ g})(8/\text{day}) = 0.2$ lb/day

$(10 \text{ ml/leak})(1.0 \text{ g/mL})(\text{lb}/454 \text{ g})(8/\text{day})(365 \text{ days/yr}) = 64$ lb/yr

Permit Unit	VOC - Daily PE2 (lb/day)	VOC - Annual PE2 (lb/Year)
S-1547-1337, S-1548-621	$2.2 + 1.8 + 0.2 = 4.2$	$791 + 657 + 64 = 1,512$

The emissions profile is included in **Attachment IV**.

Greenhouse Gas (GHG) Emissions

The chemical to be stored and loaded out in the tank is not a GHG. Therefore, no GHG emissions are expected.

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

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

Facility-wide (both S-1547 and S-1548) VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

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

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

As noted above, facility-wide (both S-1547 and S-1548) VOC emissions already exceed the offset threshold for VOC's. No other pollutants are emitted by this project; therefore, no SSPE2 calculations for these pollutants are 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

Sources S-1547 and S-1548 are existing Major Sources for VOC emissions and will remain Major Sources for VOCs. 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		1828* 318					
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)		Y Y					

*S-1547 SSPE VOCs 3,656,375/2000 = 1828 tons/yr

S-1548 SSPE VOCs 635900/2000 = 318 tons/yr

As shown above, both facilities are existing major sources for PSD for at least one pollutant. Therefore the facilities are existing major sources 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.

S-1547-1337, S-1548-621:

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

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

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold: (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	1,512	50,000	No

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

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	No
VOC*	1,512	0	Yes
PM ₁₀	Na	30,000	No
PM _{2.5}	Na	20,000	No
SO _x	Na	80,000	No

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

Since there is an increase in 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:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

In the 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	0	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

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 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.

As the tank is new QNEC = PE2/4.

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 in Section VII.C.2 above, the applicant is proposing to install a new chemical storage tank with a PE greater than 2 lb/day for VOC. BACT is triggered. BACT is not triggered for the loadout facility or for disconnection operations.

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

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 in Sections VII.C.7 and VII.C.8 above, this project does constitute a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC emissions for Federal Major Modification purposes.

2. BACT Guideline

BACT Guideline 7.3.1, applies to Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank < 5000 bbl in capacity (**Attachment V**).

3. Top-Down BACT Analysis

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

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

VOC: pressure and vacuum (PV) relief valve on tank vent set to within 10% of maximum allowable pressure

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	--	--	--	--	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	Yes

2. Quantity of Offsets Required

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

The quantity of offsets in pounds per year for VOC 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

The facility is proposing to install a new emissions unit; therefore BE = 0. 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) = $([PE2 - BE] + ICCE) \times DOR$

PE2 = 1,422 lb/yr, BE = 0, ICE = 0, DOR = 1.5 (Federal Major Modification)

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$
= $1,512 \times 1.5$
= 2,268 lb/yr

The applicant has stated that the facility plans to use ERC certificate S-3923-1 to offset the increases in VOC emissions associated with this project. The following quantities have been reserved for the project:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-3923-1	567	567	567	567

Note that, even though the tank will be permitted in both facilities S-1547 and S-1548, tank emissions only need to be fully offset once*. Therefore, the offsets requirement (condition) will be included only on ATC S-1547-1337-0.

*Rule 2201 Section 4.6.7 provides an offset exemption for relocation of equipment from one stationary source to another if offsets that otherwise would be provided were previously provided.

Proposed Rule 2201 (offset) Conditions:

S-1547-1337-0

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 567 lb, 2nd quarter - 567 lb, 3rd quarter - 567 lb, and fourth quarter - 567 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- {GC# 1983} ERC Certificate Number S-3923-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

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 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	No
SO _x			54,750 lb/year	No
PM ₁₀			29,200 lb/year	No
CO			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. 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			0	20,000 lb/year	No
SO _x			0	20,000 lb/year	No
PM ₁₀			0	20,000 lb/year	No
CO			0	20,000 lb/year	No
VOC	>20,000	>20,000	1,512	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, the project is a Federal Major Modification. Public noticing is required.

D. Daily Emissions Limits (DEL)

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.

For fixed-roof organic liquid storage tanks the DEL is expressed as throughput and true vapor pressure (TVP) permit limits.

Tank throughput shall not exceed 6,500 gallons per day based on a monthly average. [District Rule 2201] Y

Total volume of liquid loaded out shall not exceed 2,500 gallon per day. [District Rule 2201] Y

This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.6 psia under all storage conditions. [District Rule s 2201 and 4623] Y

Liquids loaded out shall have a true vapor pressure (TVP) of less than 0.6 psia. [District Rule 2201] Y

Total number of disconnects from unloading and load-out operations shall not exceed 8 per day. [District Rule 2201] Y

VOC emissions from liquid loadout and excess liquid drainage shall not exceed 2.0 lb/day. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

No monitoring is required for 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 conditions will appear on the permits:

MSDS or chemical laboratory results documenting tvp of liquid stored and loaded out shall be maintained on-site and made available for District inspection upon request. [District Rules 2201 and 4623] Y

Permittee shall maintain monthly records of average daily throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 & 4623] Y

Permittee shall keep accurate daily records of TVP, types of liquids loaded out, liquid loadout temperature, gallons per day of liquid loaded out, and number of disconnects for loading and unloading. [District Rules 1070 and 2201] Y

All records required by this permit shall be retained for a period of at least 5 years and shall be made available to the District upon request. [District Rules 1070, 2201, and 4624] N

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 is no air quality standard for VOCs and therefore an AAQA is not required.

G. Compliance Certification

The compliance certification is required for any project, which constitutes a New Major Source or a Federal Major Modification.

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major 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 Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this project does constitute a Federal, therefore this requirement is applicable. Included in **Attachment VII** is the Compliance Certification Statement.

H. Alternate Siting Analysis

The current project occurs at an existing facility. Since the new tank will 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 demonstrated above this project will not result in a significant increase in emissions; therefore, Rule 2410 does not apply.

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. Included in **Attachment VII** are Aera's Title V Compliance Certification forms for facilities S-1547 and S-1548. Continued compliance with this rule is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result

of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Attachment VIII**), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4623 - Storage of Organic Liquids

Section 5.0 requires a pressure vacuum relief valve and leak-free conditions for storage of organic material in tanks less than 19,800 gallon in capacity and a tvp range of 0.5 psia to 11 psia. The following conditions are included on the ATCs:

MSDS or chemical laboratory results documenting tvp of liquid stored and loaded out shall be maintained on-site and made available for District inspection upon request. [District Rules 2201 and 4623] Y

Tank shall be equipped with pressure/vacuum valve set to within 10 percent of the maximum working pressure of the tank. [District Rules 2201 and 4624] Y

Tank shall be in a leak-free condition. A Leak-Free condition is defined as a condition without a gas leak or liquid 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005). A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rules 2201 and 4623] Y

Therefore, compliance of this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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 ATCs S-1547-1337-0 and S-1548-621-0 subject to the permit conditions on the attached draft ATC in **Attachment IX**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1547-1337 S-1548-621	3020-05-B	6,500 gallons	\$93.00

Attachments

- I: Process Diagram
- II: Tank Emissions Calculations
- III: Liquid Loadout Emissions
- IV: Emissions Profiles
- V: BACT Guideline
- VI: BACT Analysis
- VII: Statewide Compliance Statement and Title V Compliance Certification form
- VIII: HRA
- IX: Draft ATCs

ATTACHMENT I

Process Diagram

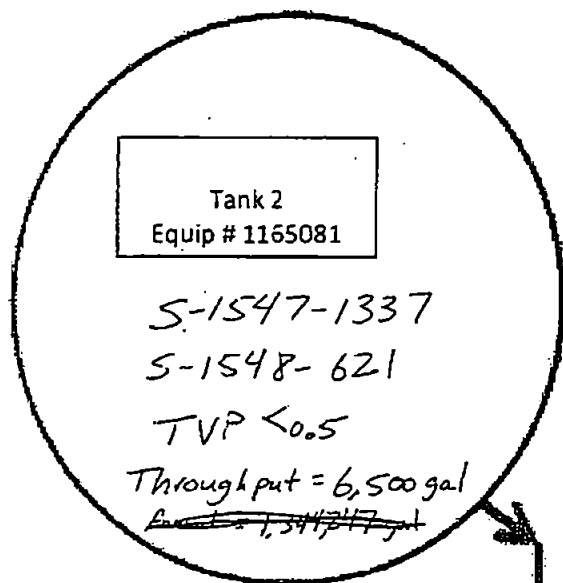
RECEIVED

OCT 16 2013

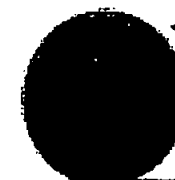
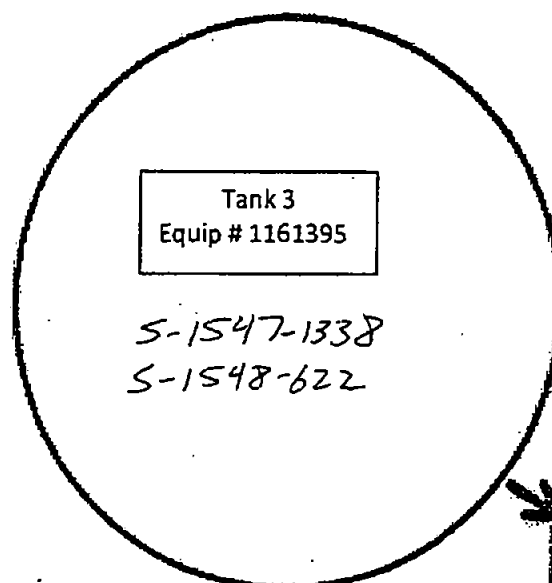
SJVAPCD
Southern Region



O2
Scavenger
Pump



VOC $\leq$ 0.5 lb/day



New Location for
O2 Scavenger



Tee

On/Off
switch

Unions

"Emergency"
Valve

Through put = 13,000 gal

VOC $\leq$ 0.5 lb/day

TVP = S-1547-1338

Bottom loading (Not splash loading) of truck

8 disconnect per day

listed on S-1547-1337, but shared w/ S-1547-1338

AAZ
10/17/13

ATTACHMENT II

Tank Emissions Calculations

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Aera 6500 poly tank
City:	Bakersfield
State:	California
Company:	Aera
Type of Tank:	Vertical Fixed Roof Tank
Description:	emulsion breaker

Tank Dimensions

Shell Height (ft):	10.83
Diameter (ft):	9.83
Liquid Height (ft):	9.83
Avg. Liquid Height (ft):	5.00
Volume (gallons):	5,580.00
Turnovers:	365.00
Net Throughput (gal/yr):	2,036,700.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	0.83
Radius (ft) (Dome Roof)	9.83

Breather Vent Settings

Vacuum Settings (paig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

5-1547-1337
5-1548-621
Monthly

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Aera 6500 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Frac.	Vapor Mass Frac.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Aera Corrosion Inhibitor	Jan	58.82	54.48	82.78	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP60 = .8
Aera Corrosion Inhibitor	Feb	61.40	66.39	66.68	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .8
Aera Corrosion Inhibitor	Mar	63.85	67.04	69.77	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .8
Aera Corrosion Inhibitor	Apr	66.68	66.01	73.95	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .8
Aera Corrosion Inhibitor	May	71.00	83.30	78.70	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP70 = .8 VP60 = .8
Aera Corrosion Inhibitor	Jun	74.47	66.32	82.63	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP70 = .8 VP60 = .8
Aera Corrosion Inhibitor	Jul	77.01	68.80	85.22	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP70 = .8 VP60 = .8
Aera Corrosion Inhibitor	Aug	78.03	66.25	83.81	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP70 = .8 VP60 = .8
Aera Corrosion Inhibitor	Sep	72.96	65.93	78.68	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP70 = .8 VP60 = .8
Aera Corrosion Inhibitor	Oct	68.33	62.00	74.86	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .8
Aera Corrosion Inhibitor	Nov	62.38	57.33	67.44	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .8
Aera Corrosion Inhibitor	Dec	58.39	54.32	62.46	85.42	0.6000	0.6000	0.6000	100.0000			100.00	Option 1: VP50 = .8 VP60 = .8

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Aera 6500 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	3.8752	4.1324	3.6329	0.1236	0.0407	7.0476	7.2589	8.8841	0.0375	5.8857	4.3770	3.5863
Vapor Space Volume (cu ft):	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459
Vapor Density (lb/cu ft):	0.0108	0.0107	0.0107	0.0106	0.0105	0.0105	0.0104	0.0104	0.0105	0.0106	0.0107	0.0108
Vapor Space Expansion Factor:	0.0278	0.0348	0.0409	0.0486	0.0537	0.0567	0.0589	0.0538	0.0486	0.0435	0.0344	0.0271
Weighted Vapor Saturation Factor:	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459	474.2459
Tank Diameter (ft):	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300
Vapor Space Height (ft):	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489	8.2489
Tank Shell Height (ft):	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300	10.8300
Average Liquid Height (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Roof Outage (ft):	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189
Roof Outage (Dome Roof):												
Roof Outage (ft):	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189	0.4189
Dome Radius (ft):	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300
Shell Radius (ft):	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150	4.9150
Vapor Density:												
Vapor Density (lb/cu ft):	0.0108	0.0107	0.0107	0.0106	0.0105	0.0105	0.0104	0.0104	0.0105	0.0106	0.0107	0.0108
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Daily Avg. Liquid Surface Temp. (deg. F):	518.2922	521.1971	523.5218	525.6478	528.6659	534.1445	538.6832	535.7010	532.6258	527.9968	522.0547	518.0564
Daily Average Ambient Temp. (deg. F):	47.7500	53.2500	57.3500	63.0000	70.9500	78.3000	84.0500	82.5500	78.6000	67.7500	58.7500	47.4000
Ideal Gas Constant R:	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Gas constant (ft-lb/mol-deg R):	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900	525.0900
Liquid Bulk Temperature (deg. R):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insolation Factor (Btu/sq ft day):	727.6001	1,068.7300	1,478.2573	1,952.7689	2,340.8181	2,554.9783	2,528.8419	2,288.7658	1,882.6802	1,401.0843	908.0287	566.5843
Vapor Space Expansion Factor:												
Vapor Space Expansion Factor:	0.0278	0.0348	0.0409	0.0486	0.0537	0.0567	0.0589	0.0538	0.0486	0.0435	0.0344	0.0271
Daily Vapor Temperature Range (deg. R):	16.6389	20.3766	23.8590	27.8713	30.7983	32.6097	32.8443	31.1288	28.1138	25.3171	20.2342	18.2789
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Daily Avg. Liquid Surface Temp. (deg. R):	518.2922	521.1971	523.5218	525.6478	528.6659	534.1445	538.6832	535.7010	532.6258	527.9968	522.0547	518.0564
Daily Min. Liquid Surface Temp. (deg. R):	514.1325	516.0632	517.8071	519.6800	522.6673	526.8821	528.4721	527.9194	525.5973	521.6678	516.8881	513.8872
Daily Max. Liquid Surface Temp. (deg. R):	522.4520	526.2510	529.4356	533.6156	538.3655	542.2870	544.8942	543.4827	538.6540	534.3281	527.1132	522.1257
Daily Ambient Temp. Range (deg. R):	18.3000	21.3000	23.1000	25.9000	27.3000	28.4000	28.9000	28.1000	26.6000	25.9000	22.1000	18.2000
Weighted Vapor Saturation Factor:												
Weighted Vapor Saturation Factor:	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342	0.8342
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Vapor Space Outage (ft):	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Working Losses (lb):	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393	60.3393
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Net Throughput (gal/mo.):	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000	169,725.0000
Annual Turnover:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000	5,580.0000
Maximum Liquid Height (ft):	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300	8.8300
Tank Diameter (ft):	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300	9.8300
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	64.0145	64.4717	65.6922	66.4829	67.2800	67.3669	67.0082	67.2234	66.3788	66.0050	64.7163	63.9256

÷ 31

= 2.18 lb/day

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Aera 6500 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Aera Corrosion Inhibitor	724.07	67.06	791.13

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification	
User Identification:	Aera 6500 poly tank
City:	Bakersfield
State:	California
Company:	Aera
Type of Tank:	Vertical Fixed Roof Tank
Description:	emulsion breaker
Tank Dimensions	
Shell Height (ft):	10.83
Diameter (ft):	9.83
Liquid Height (ft):	9.83
Avg. Liquid Height (ft):	6.00
Volume (gallons):	5,680.00
Turnovers:	365.00
Net Throughput(gal/yr):	2,036,700.00
Is Tank Heated (y/n):	N
Paint Characteristics	
Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good
Roof Characteristics	
Type:	Dome
Height (ft)	0.83
Radius (ft) (Dome Roof)	9.83
Breather Vent Settings	
Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

*Meteorological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

5-1547-1337
5-1548-621

anna?

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Aera 6600 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Frac.	Vapor Mass Frac.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Aera Corrosion Inhibitor	All	67.53	61.25	74.00	65.42	0.5000	0.6000	0.8000	100.0000			100.00	Option 1: VP60 = .8 VP70 = .6

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Aera 6500 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Annual Emission Calculations	
Standing Losses (lb):	67.3937
Vapor Space Volume (cu ft):	474.2459
Vapor Density (lb/cu ft):	0.0108
Vapor Space Expansion Factor:	0.0440
Vented Vapor Saturation Factor:	0.8342
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	474.2459
Tank Diameter (ft):	8.8300
Vapor Space Outage (ft):	6.2489
Tank Shell Height (ft):	10.8300
Average Liquid Height (ft):	5.0000
Roof Outage (ft):	0.4189
Roof Outage (Dome Roof):	
Roof Outage (ft):	0.4189
Dome Radius (ft):	8.8300
Shell Radius (ft):	4.8150
Vapor Density:	
Vapor Density (lb/cu ft):	0.0108
Vapor Molecular Weight (lb/lb-mole):	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000
Daily Avg. Liquid Surface Temp. (deg. R):	527.2857
Daily Average Ambient Temp. (deg. F):	65.4000
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	528.0900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insolation Factor (Btu/sq ft day):	1,648.9051
Vapor Space Expansion Factor:	
Vapor Space Expansion Factor:	0.0440
Daily Vapor Temperature Range (deg. R):	25.4888
Daily Vapor Pressure Range (psia):	0.0000
Breaker Vent Press. Rating Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.6000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.6000
Daily Avg. Liquid Surface Temp. (deg. R):	527.2857
Daily Min. Liquid Surface Temp. (deg. R):	520.9236
Daily Max. Liquid Surface Temp. (deg. R):	533.6676
Daily Ambient Temp. Range (deg. R):	24.5000
Vented Vapor Saturation Factor:	
Vented Vapor Saturation Factor:	0.8342
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000
Vapor Space Outage (ft):	6.2489
Working Losses (lb):	724.0714
Vapor Molecular Weight (lb/lb-mole):	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6000
Annual Net Throughput (gal/yr.):	2,036,700.0000
Annual Turnover:	365.0000
Turnover Factor:	0.2488
Maximum Liquid Volume (gal):	5,580.0000
Maximum Liquid Height (ft):	8.8300
Tank Diameter (ft):	8.8300
Working Loss Product Factor:	1.0000
Total Losses (lb):	791.4651

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Aera 6500 poly tank - Vertical Fixed Roof Tank
Bakersfield, California

Losses(lbs)			
Components	Working Loss	Breathing Loss	Total Emissions
Aera Corrosion Inhibitor	724.07	67.39	791.47

791 lb/yr

ATTACHMENT III

Liquid Loadout Emissions

5.2 Transportation And Marketing Of Petroleum Liquids¹⁻³

5.2.1 General

The transportation and marketing of petroleum liquids involve many distinct operations, each of which represents a potential source of evaporation loss. Crude oil is transported from production operations to a refinery by tankers, barges, rail tank cars, tank trucks, and pipelines. Refined petroleum products are conveyed to fuel marketing terminals and petrochemical industries by these same modes. From the fuel marketing terminals, the fuels are delivered by tank trucks to service stations, commercial accounts, and local bulk storage plants. The final destination for gasoline is usually a motor vehicle gasoline tank. Similar distribution paths exist for fuel oils and other petroleum products. A general depiction of these activities is shown in Figure 5.2-1.

5.2.2 Emissions And Controls

Evaporative emissions from the transportation and marketing of petroleum liquids may be considered, by storage equipment and mode of transportation used, in four categories:

1. Rail tank cars, tank trucks, and marine vessels: loading, transit, and ballasting losses.
2. Service stations: bulk fuel drop losses and underground tank breathing losses.
3. Motor vehicle tanks: refueling losses.
4. Large storage tanks: breathing, working, and standing storage losses. (See Chapter 7, "Liquid Storage Tanks".)

Evaporative and exhaust emissions are also associated with motor vehicle operation, and these topics are discussed in AP-42 *Volume II: Mobile Sources*.

5.2.2.1 Rail Tank Cars, Tank Trucks, And Marine Vessels -

Emissions from these sources are from loading losses, ballasting losses, and transit losses.

5.2.2.1.1 Loading Losses -

Loading losses are the primary source of evaporative emissions from rail tank car, tank truck, and marine vessel operations. Loading losses occur as organic vapors in "empty" cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. These vapors are a composite of (1) vapors formed in the empty tank by evaporation of residual product from previous loads, (2) vapors transferred to the tank in vapor balance systems as product is being unloaded, and (3) vapors generated in the tank as the new product is being loaded. The quantity of evaporative losses from loading operations is, therefore, a function of the following parameters:

- Physical and chemical characteristics of the previous cargo;
- Method of unloading the previous cargo;
- Operations to transport the empty carrier to a loading terminal;
- Method of loading the new cargo; and
- Physical and chemical characteristics of the new cargo.

The principal methods of cargo carrier loading are illustrated in Figure 5.2-2, Figure 5.2-3, and Figure 5.2-4. In the splash loading method, the fill pipe dispensing the cargo is lowered only part way into the cargo tank. Significant turbulence and vapor/liquid contact occur during the splash

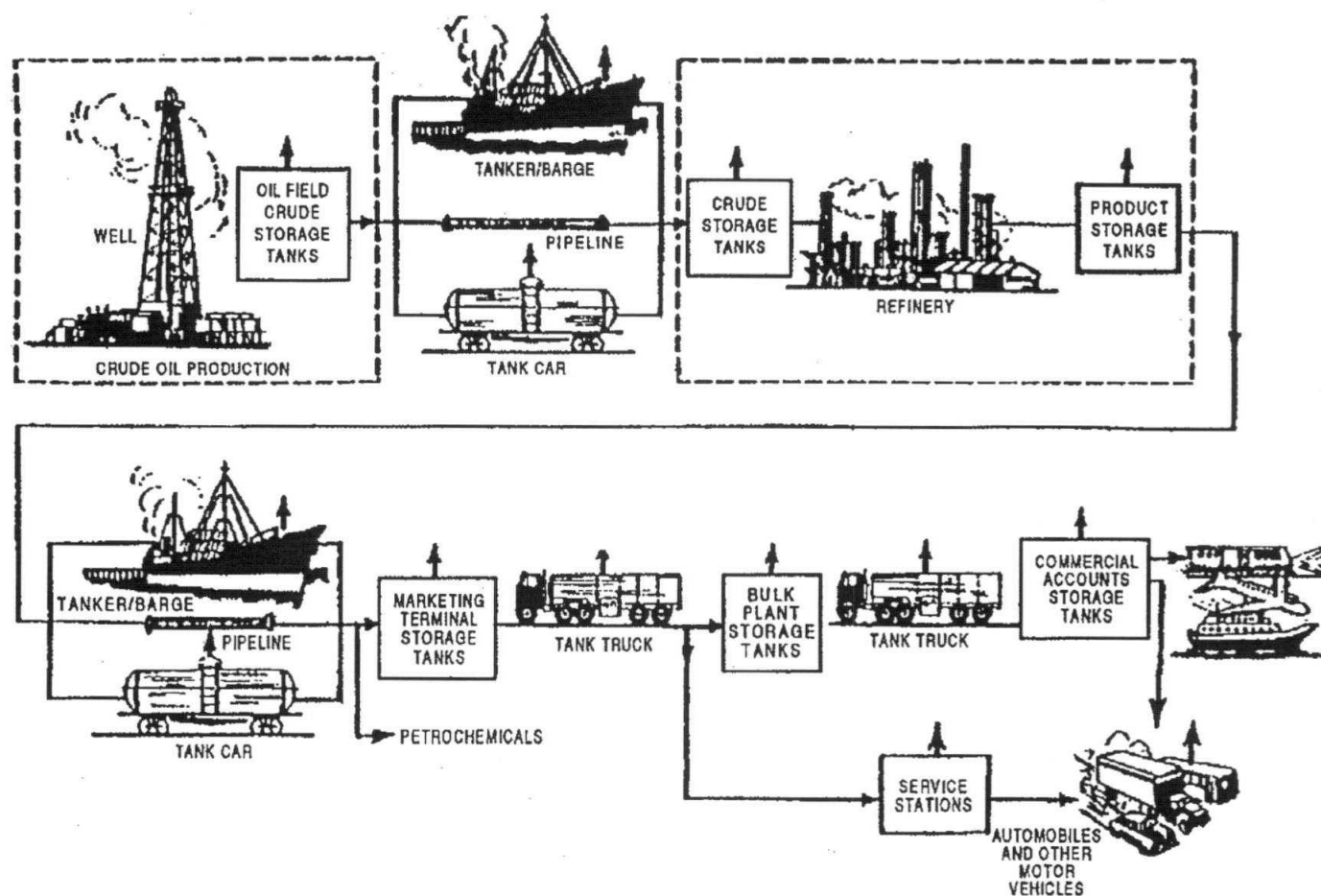


Figure 5.2-1. Flow sheet of petroleum production, refining, and distribution systems.
(Points of organic emissions are indicated by vertical arrows.)

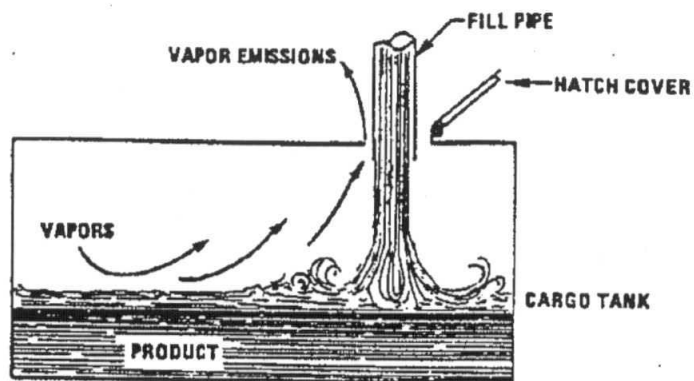


Figure 5.2-2. Splash loading method.

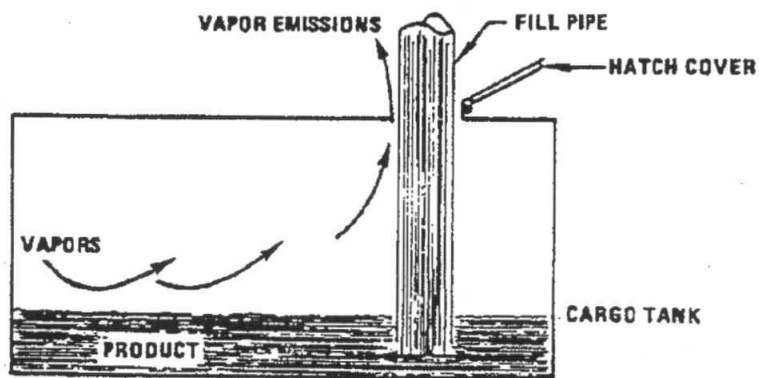


Figure 5.2-3. Submerged fill pipe.

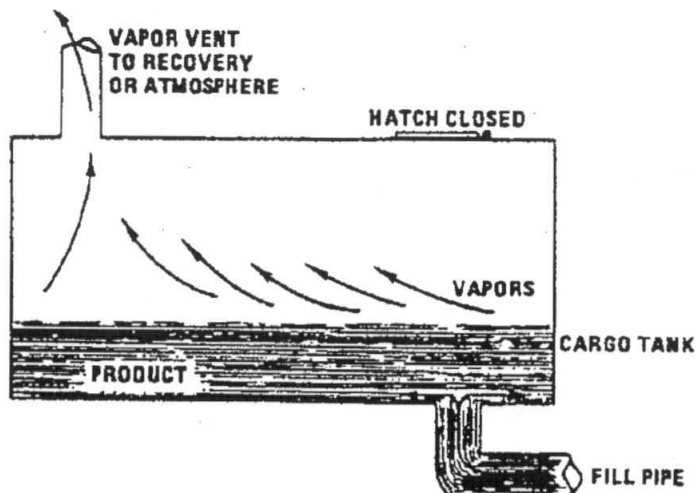


Figure 5.2-4. Bottom loading.

loading operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

The recent loading history of a cargo carrier is just as important a factor in loading losses as the method of loading. If the carrier has carried a nonvolatile liquid such as fuel oil, or has just been cleaned, it will contain vapor-free air. If it has just carried gasoline and has not been vented, the air in the carrier tank will contain volatile organic vapors, which will be expelled during the loading operation along with newly generated vapors.

Cargo carriers are sometimes designated to transport only one product, and in such cases are practicing "dedicated service". Dedicated gasoline cargo tanks return to a loading terminal containing air fully or partially saturated with vapor from the previous load. Cargo tanks may also be "switch loaded" with various products, so that a nonvolatile product being loaded may expel the vapors remaining from a previous load of a volatile product such as gasoline. These circumstances vary with the type of cargo tank and with the ownership of the carrier, the petroleum liquids being transported, geographic location, and season of the year.

One control measure for vapors displaced during liquid loading is called "vapor balance service", in which the cargo tank retrieves the vapors displaced during product unloading at bulk plants or service stations and transports the vapors back to the loading terminal. Figure 5.2-5 shows a tank truck in vapor balance service filling a service station underground tank and taking on displaced gasoline vapors for return to the terminal. A cargo tank returning to a bulk terminal in vapor balance service normally is saturated with organic vapors, and the presence of these vapors at the start of submerged loading of the tanker truck results in greater loading losses than encountered during nonvapor balance, or "normal", service. Vapor balance service is usually not practiced with marine vessels, although some vessels practice emission control by means of vapor transfer within their own cargo tanks during ballasting operations, discussed below.

Emissions from loading petroleum liquid can be estimated (with a probable error of ± 30 percent)⁴ using the following expression:

$$L_L = 12.46 \frac{SPM}{T} \quad (1)$$

where:

L_L = loading loss, pounds per 1000 gallons (ib/10³ gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia)
(see Section 7.1, "Organic Liquid Storage Tanks")

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Section 7.1, "Organic Liquid Storage Tanks")

T = temperature of bulk liquid loaded, °R (°F + 460)

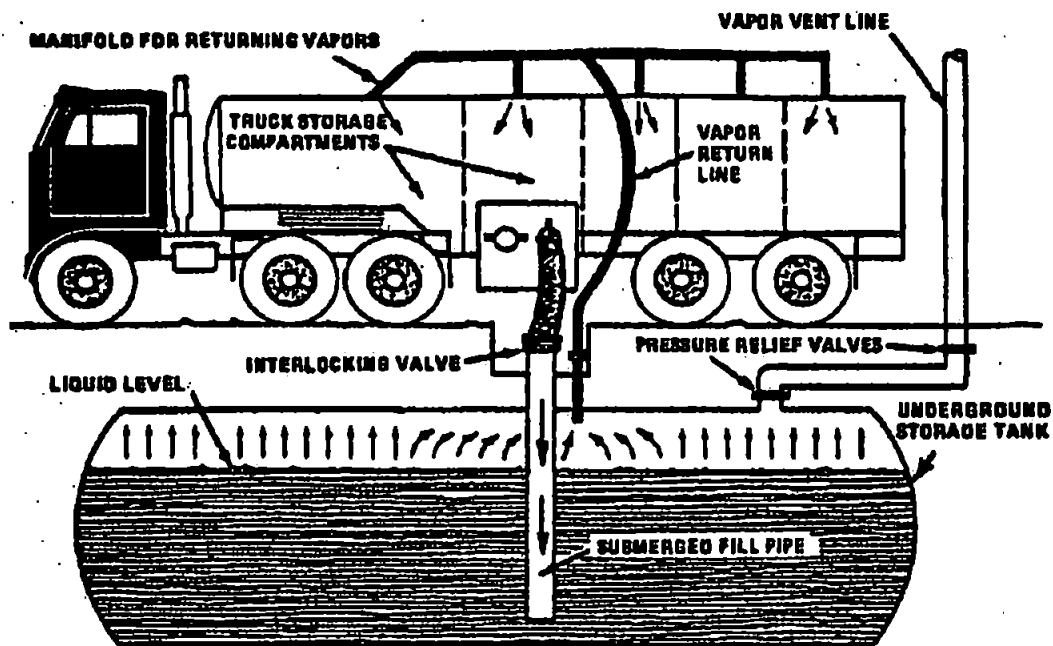


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode Of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00
Marine vessels*	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

* For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

The saturation factor, S , represents the expelled vapor's fractional approach to saturation, and it accounts for the variations observed in emission rates from the different unloading and loading methods. Table 5.2-1 lists suggested saturation factors.

Emissions from controlled loading operations can be calculated by multiplying the uncontrolled emission rate calculated in Equation 1 by an overall reduction efficiency term:

$$\left(1 - \frac{\text{eff}}{100}\right)$$

The overall reduction efficiency should account for the capture efficiency of the collection system as well as both the control efficiency and any downtime of the control device. Measures to reduce loading emissions include selection of alternate loading methods and application of vapor recovery equipment. The latter captures organic vapors displaced during loading operations and recovers the vapors by the use of refrigeration, absorption, adsorption, and/or compression. The recovered product is piped back to storage. Vapors can also be controlled through combustion in a thermal oxidation unit, with no product recovery. Figure 5.2-6 demonstrates the recovery of gasoline vapors from tank trucks during loading operations at bulk terminals. Control efficiencies for the recovery units range from 90 to over 99 percent, depending on both the nature of the vapors and the type of control equipment used.⁵⁻⁶ However, not all of the displaced vapors reach the control device, because of leakage from both the tank truck and collection system. The collection efficiency should be assumed to be 99.2 percent for tanker trucks passing the MACT-level annual leak test (not more than 1 inch water column pressure change in 5 minutes after pressurizing to 18 inches water followed by pulling a vacuum of 6 inches water).⁷ A collection efficiency of 98.7 percent (a 1.3 percent leakage rate) should be assumed for trucks passing the NSPS-level annual test (3 inches pressure change). A collection efficiency of 70 percent should be assumed for trucks not passing one of these annual leak tests.⁶

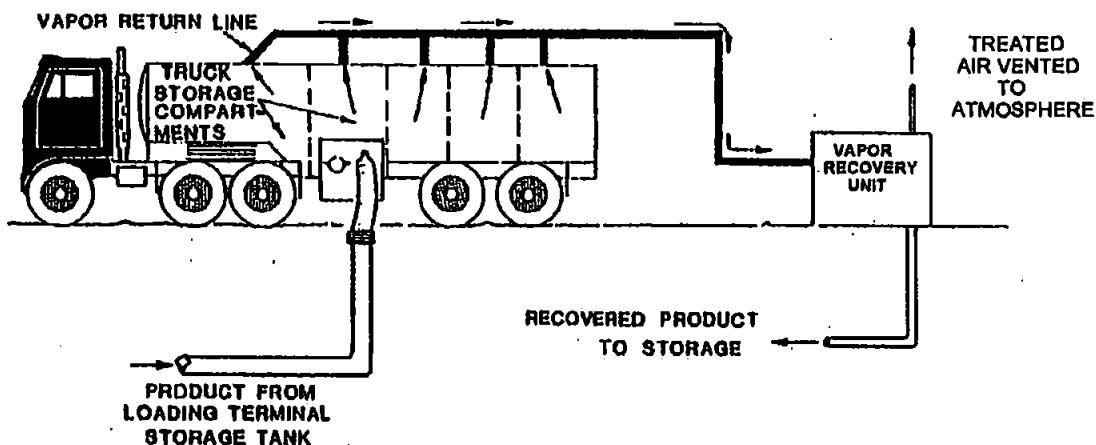


Figure 5.2-6. Tank truck loading with vapor recovery.

ATTACHMENT IV Emissions Profiles

Permit #: S-1548-821-0	Last Updated
Facility: AERA ENERGY LLC	02/08/2014 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1512.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	378.0
Q2:	0.0	0.0	0.0	0.0	378.0
Q3:	0.0	0.0	0.0	0.0	378.0
Q4:	0.0	0.0	0.0	0.0	378.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1547-1337-0	Last Updated
Facility: AERA ENERGY LLC	02/08/2014 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1512.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	378.0
Q2:	0.0	0.0	0.0	0.0	378.0
Q3:	0.0	0.0	0.0	0.0	378.0
Q4:	0.0	0.0	0.0	0.0	378.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					567.0
Q2:					567.0
Q3:					567.0
Q4:					567.0

ATTACHMENT V BACT Guideline

ATTACHMENT VI BACT Analysis

Top Down BACT Analysis

VOC emissions may occur when the produced fluids from the crude oil production wells enter the oil storage tanks.

Step 1 - Identify All Possible Control Technologies

BACT Guideline 7.3.1 lists the controls that are considered potentially applicable to fixed-roof organic liquid storage or processing tank <5,000 bbl tank capacity. The VOC control measures are summarized below.

Technologically feasible:

99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).

Achieved in Practice:

PV relief valve set to within 10% of maximum allowable pressure.

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).
2. PV relief valve set to within 10% of maximum allowable pressure.

Step 4 - Cost Effectiveness Analysis

Applicant provided costs for a vapor control system including a flare which are included after the following cost effectiveness calculation:

The annualized capital cost is

$AP = (P) \{[(i) (1 + i)^n] / [(1 + i)^n - 1]\}$, where
AP = Equivalent Annual Capital Cost of Control Equip.

P = Present value of the control equipment, including installation cost. \$123,998
(flare, compressors, piping, electronic controls) + \$5,850 (installation) =
\$129,848 (see cost information in Appendix G)
i = interest rate (use 10% per policy)
n = equipment life (assume 10 years per policy)

$$AP = (P) \{[(0.1) (1 + 0.1)^{10}] / [(1 + 0.1)^{10} - 1]\}$$
$$AP = (\$129,848) \times (0.1627) = \$21,126/\text{year}$$

Annual Operator Cost = \$74,460

For calculation of the amount of VOCs removed from the tank (emissions unit) with the vapor control system, 100% control is assumed (conservative). The VOCs removed annually are

$$\text{Tons/yr} = (1,422 \text{ lb/yr}) / 2000 \text{ lb/ton} = 0.7 \text{ tons/yr}$$

$$\text{Annualized cost} = (\$21,126 + \$74,460) / \text{yr} / 0.7 \text{ tons/yr}$$
$$= \$136,551/\text{ton}$$

This exceeds the cost effectiveness threshold for VOCs of \$17,500/ton. Therefore the vapor control system is not cost effective.

Step 5 - Select BACT

PV relief valve set to within 10% of maximum allowable pressure of the tank.



A Professional Reliable Offfield Services Company

January 3, 2014

Proposal No. PROS-14-100

Commercial and Financial Offer

John Ludwick
Environmental Engineer
Aera Energy
Phone: (661) 665-4472
Cell phone 661-699-2827
E-Mail: JJLudwick@aeraenergy.com



Dear Mr. Ludwick,

PROS Incorporated is pleased to submit the following quotation for your consideration. This quotation is for providing a vapor Recovery System for your chemical tanks @ Sulfa Plant 20. Quotation is based on the information you have provided to PROS Inc.

Equipment Purchase:

One (1) ea. BOSS SCG8-3.69 Screw Compressor Package, One (1) ea. 4" x 25' Guy supported Air Assist Flare, One (1) ea. Nuflo 2" Dual Chambered Orifice Fitting with One (1) ea. Nuflo Scanner 2000 Micro EFM Flow Analyzer.

Stock Number	Description	Price
2331-XX	BOSS SCG8-3.69 SCREW COMPRESSOR Package With 15 HP Motor for main compressor Driver. Includes on skid process piping and utility piping. Inlet Filter / Blow case scrubber, wiring and instrumentation. Allen Bradley variable frequency drive. Structural steel skid with 2" pollution rail. Standard correct compression paint. Fin-Fan cooler with motor for compressor oil. On skid oil pump for compressor lubrication. On skid Blow-down valve.	\$69,940.00
1710	4" Diameter gas x 16" air x 25' Guy supported Air Assist Flare. 4 foot x 4" MAVP-0416 Air Flare tip, 21' riser for flare tip, w/guy wire eyelet assemblies. Includes Flamex Pilot, Continuous spark & continuous flame pilot. Smokeless Flow rate 0 to 100% of maximum capacity. 62 SCFH of Natural gas @ 8 -10psig for pilot gas.	\$35,263.00
1220	Electronic Gas Flow Computer - Scanner 2000 MicroEFM Flow Analyzer Electronic gas flow computer used for flare emissions monitoring and recording.	\$3,638.00
1710	NUFLO 2" Dual Chamber Orifice Fitting	\$3,656.72
1710	4" In-Line Deflagration Arrestor - to be located at base of Flare to eliminate detonation back flash.	\$2,850.00
Equipment Cost:		\$115,347.72
California Sales Tax 7.5%		\$8,651.08
Total		\$123,998.80

Shipping: 3400 Patton Way
Bakersfield, CA • 93308

Mailing: PO Box 20996
Bakersfield, CA • 93390

Office (661) 589-5400
Fax (661) 589-5228



A Professional Reliable Offfield Services Company

January 3, 2014

Proposal No. PROS-14-100

Payment:

Payment terms on all rental and service charges are: ½% discount if paid within 10 Days of the date of invoice, net (30) days.

Commitment to Delivery: Delivery from Acceptance of Purchase Order: delivery of equipment will be based on shop schedule at time of order. (8 weeks from receipt of Purchase Order)

Equipment Damage

Any equipment damaged as a result of well conditions or enhanced recovery techniques will be replaced at the renter's expense. These charges shall include labor.

TERMS AND CONDITIONS

All terms and conditions apply as stated in PROS Inc. Price Schedule dated Effective January 1, 2011. All prices are net any tax and / or charge which may now or hereafter be imposed by any government body foreign or domestic (Federal, State, County, Municipal, VAT, duties or special Districts), directly or indirectly, upon or in conjunction with any PROS Inc. equipment or Services. All price quotes are valid for a period of 30 days from date of submission and are rendered on a project-by-project basis.

PROS, inc. appreciates the opportunity to submit its proposal and we look forward to working with you on this project. If the need arises for additional details or further clarification / explanation to complete your assessment of our proposal, do not hesitate to contact us @ (661) 589-5400, cell (661) 201-3446 or Email: mcline@proswelltestlmg.com

Respectfully,

Mike Cline

Mike Cline
Operations Manager

To accept this quotation, sign and return:

Customer Approval / Approver

Date

Shipping: 3400 Patton Way
Bakersfield, CA • 93308

Office (661) 589-5400
Fax (661) 589-5228

Mailing: PO Box 20996
Bakersfield, CA • 93390

ATTACHMENT VII
Statewide Compliance Statement
Title V Compliance Certification form

San Joaquin Valley
Unified Air Pollution Control District

RECEIVED
JAN 16 2014

TITLE V COMPLIANCE CERTIFICATION FORM

SJA
South

Filter Plant corrosion inhibitor tank

I. TYPE OF PERMIT ACTION (Check appropriate box)

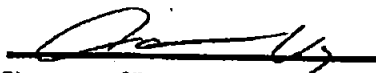
- ☒ SIGNIFICANT PERMIT MODIFICATION ☐ ADMINISTRATIVE
☐ MINOR PERMIT MODIFICATION ☐ AMENDMENT

COMPANY NAME: Aera Energy LLC	FACILITY ID: S-1547
1. Type of Organization: ☒ Corporation ☐ Sole Ownership ☐ Government ☐ Partnership ☐ Utility	
2. Owner's Name: Aera Energy LLC	
3. Agent to the Owner: N/A	

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

- ☒ Based on information and belief formed after reasonable inquiry, the emission units identified in this application will continue to comply with the applicable federal requirement(s) which the emission units are in compliance.
- ☒ Based on information and belief formed after reasonable inquiry, the emission units identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- ☒ Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- ☒ Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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


Signature of Responsible Official

Adrian Vega
Name of Responsible Official (please

Process Supervisor
Title of Responsible Official (please print)

1-16-14
Date

655
2827
JSL call

Title I Compliance Certification

CERTIFICATION

RECEIVED

FEB 05 2014

SJVAPCD
Southern Region

Aera Energy LLC hereby certifies as follows:

1. Aera Energy LLC owns or operates certain major stationary sources in the State of California. Such sources are comprised of a large number of emission points. As used in this certification, the term "major stationary source" shall, with respect to Aera Energy LLC stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201.3.15, and shall, with respect to all of Aera Energy LLC'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 Aera Energy LLC in the State of California are either in compliance, or on a schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plans approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of Aera Energy LLC's major stationary sources in the State of California by those employees of Aera Energy LLC who have operational responsibility for compliance. In conducting such reviews, Aera Energy LLC and its employees have acted in good faith and have exercised reasonable best efforts to identify any exceedances 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:

Frank E. Cummings

Date:

1/30/2014

Title:

EHS Manager

Time:

1:03 PM

ATTACHMENT VIII HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
From: Leland Villalvazo – Technical Services
Date: March 3, 2014
Facility Name: Aera Energy LLC
Location: LOWSS / HOWSS
Application #(s): S-1547 / 1548
Project #: S-1133652 / 1133661

A. RMR SUMMARY

RMR Summary			
Categories	Chemical Storage Tank (1337 / 621)	Project Totals	Facility Totals
Prioritization Score	0.00*	0.00*	0.00
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	No		

*A prioritization was not performed after determining no Hazardous Air Pollutants (HAPs) are associated with this project. No further analysis was required.

I. Project Description

Technical Services received a request to perform a Risk Management Review and an AAQA for the installation of a chemical storage tank that would operate at either S-1547 (LOWSS) or S-1548 (HOWSS).

II. Analysis

After reviewing the information provided in the Risk Management Review request along with MSDS sheets for the proposed coating products, Technical Services determined that there are no HAPs associated with this project. Therefore, no further analysis or prioritization was required for this project.

Additionally, since no ambient air quality standard exists for VOCs no AAQA was required for the project.

III. Conclusion

The proposed project will not contribute to the facility's risk. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

Since no ambient air quality standard exists for VOCs the project will not contribute or cause an exceedance to an ambient air quality standard.

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.

ATTACHMENT IX Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: S-1548-621-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
CA

SECTION: 20 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

6500 GALLON CHEMICAL STORAGE TANK WITH PV VALVE AND LIQUID LOADOUT OPERATION (ALSO PERMITTED AS S-1547-1337)

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. Tank shall be equipped with pressure/vacuum valve set to within 10 percent of the maximum working pressure of the tank. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
4. Tank shall be in a leak-free condition. A Leak-Free condition is defined as a condition without a gas leak or liquid 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005). A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Tank throughput shall not exceed 6,500 gallons per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (861) 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.

Sayed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-1548-621-0: Mar 8 2014 8:16AM - EDGEHILL : Joint Inspection NOT Required

6. Total volume of liquid loaded out shall not exceed 2,500 gallon per day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.6 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Liquids loaded out shall have a true vapor pressure (TVP) of less than 0.6 psia [District Rule 2201] Federally Enforceable Through Title V Permit
9. Total number of disconnects from unloading and load-out operations shall not exceed 8 per day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions from liquid loadout and excess liquid drainage shall not exceed 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. MSDS or chemical laboratory results documenting tvp of liquid stored and loaded out shall be maintained on-site and made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Permittee shall maintain monthly records of average daily throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature and TVP. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Permittee shall keep accurate daily records of TVP, types of liquids loaded out, liquid loadout temperature, gallons per day of liquid loaded out, and number of disconnects for loading and unloading. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
14. Records shall be maintained on site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 4623 and 4624] Federally Enforceable Through Title V Permit
15. VOC emissions from the tank are fully offset with ERC Certificate S-3923-1 listed on ATC S-1547-1337-0. [District Rule 2201] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1647-1337-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 20 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

6500 GALLON CHEMICAL STORAGE TANK WITH PV VALVE AND LIQUID LOADOUT OPERATION (ALSO PERMITTED AS S-1548-621)

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. Tank shall be equipped with pressure/vacuum valve set to within 10 percent of the maximum working pressure of the tank. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
4. Tank shall be in a leak-free condition. A Leak-Free condition is defined as a condition without a gas leak or liquid 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005). A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Tank throughput shall not exceed 6,500 gallons per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Sayed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1547-1337-0: Mar 8 2014 8:16AM - EDOENLR : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-6586

6. Total volume of liquid loaded out shall not exceed 2,500 gallon per day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.6 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Liquids loaded out shall have a true vapor pressure (TVP) of less than 0.6 psia [District Rule 2201] Federally Enforceable Through Title V Permit
9. Total number of disconnects from unloading and load-out operations shall not exceed 8 per day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions from liquid loadout and excess liquid drainage shall not exceed 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. MSDS or chemical laboratory results documenting tvp of liquid stored and loaded out shall be maintained on-site and made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
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14. Records shall be maintained on site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 4623 and 4624] Federally Enforceable Through Title V Permit
15. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 567 lb, 2nd quarter - 567 lb, 3rd quarter - 567 lb, and fourth quarter - 567 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
16. ERC Certificate Number S-3923-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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