



NOV 22 2013

Ms. Theresa Geijer Equilon Enterprises, LLC 2555 13th Ave SW Seattle, WA 98134

Re: Proposed ATC / Certificate of Conformity (Significant Mod) District Facility # N-758 Project # N-1123247

Dear Ms. Geijer:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project involves modifications to permits for storage and loading equipment at a gasoline bulk terminal.

After addressing all comments made during the 30-day public notice and the 45day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates 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 Authorities 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. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

<u>Si</u>ncerely,

David Warner Director of Permit Services

DW:JK/st

Enclosures

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

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San Joaquin Valley Air Pollution Control District Authority to Construct Application Review

Facility Name:	Equilon Entérprises, LLC	Date:	November 18, 2013
Mailing Address:	2555 13 th Ave SW	Engineer	Jagmeet Kahlon
	Seattle, WA 98134	Lead Engineer:	Nick Peirce
Contact Person:	Theresa Geijer		
Telephone:	(206) 618-9061		
Fax:	(206) 826-0492		
Application #(s):	N-758-4-5, '-13-9, '-14-4 and '-16	3-0	
Project #:	N-1123247		
Deemed Complete:	October 8, 2013		

I. Proposal

N-758-4-5: 504,000 gallons (12,000 barrels) above ground internal floating roof tank

The applicant has proposed to expand the use of this tank to store diesel in addition to the currently permitted gasoline or denatured ethanol storage. They have proposed to increase the monthly throughput rate from 1,250,000 gallons to 7,560,000 gallons. No change to the daily throughput rate is proposed.

<u>N-758-13-9: Vapor recovery system serving loading racks and storage tanks</u> The applicant has proposed to increase the annual throughput rate from 123,733,750 gallons to 196,000,000 gallons. No change to the daily throughput rate is proposed.

<u>N-758-14-4: 689, 139 gallons (16,408 barrels) external floating roof tank</u> The applicant has proposed to expand the use of this tank to store diesel or denatured ethanol in addition to the currently permitted gasoline storage. This tank is equipped with a mechanical shoe primary seal and wiper seal to reduce volatile organic compound (VOC) emissions.

<u>N-758-16-0: 2,226,000 gallons (53,000 barrels) internal floating roof tank</u>. The applicant has proposed to convert the existing diesel storage tank to store gasoline or denatured ethanol. This tank is evaluated as a new emissions unit.

This facility is a Major Source for VOC emissions, and possesses a Title V permit. The proposed project is a Federal Major Modification under Rule 2201; consequently this project triggers a 30-day public notice. The facility has requested to obtain Authorities to Construct (ATCs) with Certificate of Conformity (COC), which is EPA's 45-day review of the draft permits before the issuance of final permits. Both COC and public notice will run concurrently.

II. Applicable Rules

- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2410 Prevention of Significant Deterioration (11/26/12)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 4001 New Source Performance Standards (4/14/99) 40 CFR Part 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984 40 CFR Part 60 Subpart XX – Standards of Performance for Bulk Gasoline Terminals
- Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04) 40 CFR Part 63 Subpart R – Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) 40 CFR Part 63 Subpart BBBBBB – Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities
- Rule 4102 Nuisance (12/17/92)
- Rule 4623 Storage of Organic Liquids (5/19/05)
- Rule 4624 Transfer of Organic Liquid (12/20/07)
- California Health and Safety Code 41700 (Public Nuisance)
- California Health and Safety Code 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

This facility is located at 3515 Navy Dr, Stockton, California. There is no K-12 school within 1,000 feet of this location. Therefore, school notice, under California Health and Safety Code 42301.6, is not required for this project.

IV. Process Description

This facility is a bulk distribution terminal. Gasoline, diesel, and denatured ethanol are delivered to the facility via pipeline and trucks for bulk storage. As required by customer demand, organic liquids are loaded from the bulk storage tanks into tanker trucks for delivery to various retail/non-retail gasoline stations and other gasoline fueling facilities.

V. Equipment Listing

Pre-Project Equipment Description

Permit #	Equipment Description
N-758-4-4	ONE 504,000 GALLON (12,000 BBL) ABOVEGROUND INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL STORAGE TANK #19 WITH A PRIMARY MECHANICAL SHOE TYPE SEAL AND SECONDARY RIM-MOUNTED WIPER SEAL
N-758-13-8	ONE JOHN ZINK VAPOR RECOVERY SYSTEM, CARBON ADSORPTION UNIT, MODEL #AA1218715B AND VAPOR BLADDER TANK #16 IN THE VAPOR RECOVERY LINE BEFORE THE VAPOR RECOVERY SYSTEM.
N-758-14-3	ONE 689,136 GALLON (16,408 BBL) ABOVEGROUND WELDED EXTERNAL FLOATING ROOF GASOLINE STORAGE TANK (TANK #18) WITH A MECHANICAL SHOE TYPE PRIMARY SEAL AND A SECONDARY WIPE SEAL

Post-Project Equipment Description

Permit.#_	Equipment Description
N-758-4-5	ONE 504,000 GALLON (12,000 BBL) ABOVEGROUND INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL STORAGE TANK #19 WITH A PRIMARY MECHANICAL SHOE TYPE SEAL AND SECONDARY RIM-MOUNTED WIPER SEAL
N-758-13-9	ONE JOHN ZINK VAPOR RECOVERY SYSTEM, CARBON ADSORPTION UNIT, MODEL #AA1218715B AND VAPOR BLADDER TANK #16 IN THE VAPOR RECOVERY LINE BEFORE THE VAPOR RECOVERY SYSTEM.
N-758-14-4	ONE 689,136 GALLON (16,408 BBL) ABOVEGROUND WELDED EXTERNAL FLOATING ROOF GASOLINE STORAGE TANK (TANK #18) WITH A MECHANICAL SHOE TYPE PRIMARY SEAL AND A SECONDARY WIPE SEAL
N-758-16-0	ONE 2,226,000 GALLON (53,000 BBL) WELDED INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL/DIESEL STORAGE TANK (TANK #24) WITH A MECHANICAL SHOE PRIMARY SEAL AND A SECONDARY RIM-MOUNTED WIPER SEAL

Vi. Emission Control Technology Evaluation

N-758-4-5, '-13-9 and '-14-4

The applicant is not proposing any changes to the existing emission control technique. Therefore, emission control technology evaluation is not required for these permit units.

<u>N-758-16-0</u>

The tank is equipped with a mechanical shoe primary seal and a secondary wiper seal to reduce VOC emissions. These seals are expected to control at least 95% of VOC emissions over the uncontrolled storage tank.

VII. General Calculations

A. Assumptions

- Assumptions will be stated, as they are made during this evaluation.
- B. Emission Factors
 - 1. Pre-Project Emission Factors (EF1):

<u>N-758-4-4, '-14-3</u>

Process:

The potential VOC emissions from each tank will either be calculated using EPA's Tanks 4.0.9d software program, or taken from the previous permitting actions. Therefore, emission factors are not listed here.

Other components:

Fugitive VOC emissions from valves, flanges, compressor seals etc. will be determined using CAPCOA 's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-1b (Feb 1999) – Marketing Terminal. Total hydrocarbons (THC) reported in Table IV-1b are all assumed to be VOC.

Component Tupo		VOC Emission Factor
Component Type	Source Type	lb/hr/source
Valves	Gas	2.87E-05
Valves	Light Liquid	9.48E-05
Dume Coole	Gas	1.43E-04
Pump Seals	Light Liquid	1.19E-03
Others (compressors	Gas	2.65E-04
and others)	Light Liquid	2.87E-04
Fittings (connectors	Gas	9.26E-05
and flanges)	Light Liquid	1.76E-05

<u>N-758-13-8</u>

Per PTO N-758-13-8, EF1 = 0.08 lb-VOC/1,000 gallon of organic liquid loaded

2. Post-Project Emission Factors (EF2):

<u>N-758-4-5, '-13-9, '-14-4</u> EF2 are same as EF1. Please refer to the discussion above. N-758-16-0

Process:

The potential VOC emissions will be estimated using EPA's Tanks 4.0.9d software program.

Other components:

Please refer to the table above under N-758-4-4, '-14-3.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

N-758-4-4¹

Process:

This tank is permitted to store gasoline or denatured ethanol. The permit includes daily as well as monthly throughput limits. The potential emissions from this unit were estimated under project N-1110088 assuming gasoline with Reid Vapor Pressure (RVP) of 13 psi will be stored in the tank. However, RVP of the gasoline varies throughout the year, anywhere from 5.99 psi during summer months to 14 psi during winter months. The applicant's consultant has supplied the pre and post project TANKS runs under various RVP values using the permitted daily and monthly throughput of 504,000 gal/day and 1,250,000 gal/month. The results indicate that the highest emissions occur during the month of April; therefore, to get the daily emissions, the monthly emissions will be divided by 30.

PE1 = (342.9 lb-VOC/month) + (30 days/month) = 11.4 lb-VOC/day

The annual emissions are directly obtained from the TANKS run.

PE1 = 2,395 lb-VOC/yr

Note that EPA's Tanks 4.0.9d program results are included in Appendix III of this document.

Other components:

Fugitive component emissions are estimated using the following equation and are summarized in the following table.

¹Permit N-758-4-4 also contains daily VOC emission limits. These limits are not used here since the pre and post project daily emissions are estimated using same methodology, that is, permitted daily and monthly throughput rates end various RVP values instead of a constant RVP of 13 for pre and post project emissions.

Component		VOC	Component	PE2	
Туре	Source Type	Ib/hr/source	Count	lb/day	lb/yr
	Gas	2.87E-05	0	0.00	0
Valves	Light Liquid	9.48E-05	34	0.08	28
	Gas	1.43E-04	0	0.00	0
Pump Seals	Light Liquid	1.19E-03	3.	0.09	31
Others	Gas	2.65E-04	0	0.00	0
(compressors and others)	Light Liquid	2.87E-04	0	0.00	0
Fittings	Gas	9.26E-05	0	0.00	0
(connectors and flanges)	Llght Llquid	1.76E-05	64	0.03	10
		· · ·	Total:	0.20	69

PE1	= VOC (lb/hr/source) × component count × 24 hr/day
	= VOC (lb/hr/source) × component count × 8,760 hr/yr

PE1_{Total} = PE1_{Tank} + PE1_{Components}

= 11.4 lb-VOC/day + 0.2 lb-VOC/day = 11.6 lb-VOC/day

= 2,395 lb-VOC/yr + 69 lb-VOC/yr = 2,464 lb-VOC/yr

<u>N-758-13-7</u>

VOC emissions due to loading of organic liquids in tanker trucks are routed to a vapor recovery system under this permit. This permit limits gasoline throughput to 895,000 gal/day and 123,733,750 gal/year. The potential emissions would be:

- PE1 = (0.08 lb-VOC/1,000 gal of organic liquid loaded)(895,000 gal/day) = 71.6 lb-VOC/day
 - = (0.08 lb-VOC/1,000 gal of organic liquid loaded)(123,733,750 gal/yr) = 9,899 lb-VOC/yr

This permit limits fugitive VOC emissions associated with the unit to 9,362 lb-VOC/yr. Thus,

PE1_{Total} = 9,899 lb-VOC/yr + 9,362 lb-VOC/yr = 19,261 lb-VOC/yr <u>N-758-14-3</u>

Process:

This tank is permitted to store gasoline. Further, the permit lists daily and annual throughput limits. The monthly throughput is estimated to be 20,961,220 gal². EPA's TANKS 4.0d program run indicate that the highest emissions occur in the month of June. Therefore, to obtain the daily emissions, monthly emissions are divided by 30.

PE1 = (866.0 lb-VOC/month)/(30 days/month) = 28.9 lb-VOC/day

The annual emissions are directly obtained from the TANKS run.

= 6,707 lb-VOC/yr

Note that EPA's Tanks 4.0.9d program results are included in Appendix III of this document.

Other components:

Fugitive component emissions are estimated using the following equation and are summarized in the following table.

Component	Source Type	VOC	Component	PE2	
Туре	Source Type	lb/hr/source	Count	lb/day	lb/yr
Mahuan	Gas	2.87E-05	0	0.00	0.
Valves	Light Liquid	9.48E-05	5	0.01	4
0	Gas	1.43E-04	0	0.00	0
Pump Seals	Light Liquid	1.19E-03	1	0.03	10
Others	Gas	2.65E-04	0	0.00	0
(compressors and others)	Light Liquid	2.87E-04	0	0.00	0
Fittings	Gas	9.26E-05	0	0.00	0
(connectors and fianges)	Light Liquid	1.76E-05	10	0.00	2
·			Total:	0.04	16

PE1 = VOC (lb/hr/source) × component count × 24 hr/day = VOC (lb/hr/source) × component count × 8,760 hr/yr

PE1_{Total} = PE1_{Tank} + PE1_{Components} = 28.9 lb-VOC/day + 0.0 lb-VOC/day = **28.9 lb-VOC/day**

²Monthly throughput rate = 689,136 gal/day × 365 days/yr × year/12 months

= 6,707 lb-VOC/yr + 16 lb-VOC/yr = 6,723 lb-VOC/yr

2. Post Project Potential to Emit (PE2)

N-758-4-5

Process:

The applicant has proposed to increase the monthly throughput rate from 1,250,000 gallons to 7,560,000 gallons. EPA's TANKS 4.0.9d program is used to estimate daily and monthly emissions using the proposed throughput rate. The results indicate that the highest emissions occur during the month of April. Therefore, the monthly emissions will be divided by 30 to get the daily emissions.

PE2 = (342.9 lb-VOC/month) + (30 days/month) = 11.4 lb-VOC/day

The annual emissions are directly extracted from the TANKS run.

= 2,699 lb-VOC/yr

Note that EPA's Tanks 4.0.9d program results are included in Appendix III of this document.

Other components:

There is no change in component count. Therefore, PE2 will be same as PE1.

- PE2 = 0.2 lb/day = 69 lb-VOC/yr
- PE2_{Total} = PE2_{Tank} + PE2_{Components} = 11.4 lb-VOC/day + 0.2 lb-VOC/day = **11.6 lb-VOC/day**

= 2,699 lb-VOC/yr + 69 lb-VOC/yr = 2,768 lb-VOC/yr

<u>N-758-13-9</u>

The applicant has proposed to increase the annual throughput rate from 123,733,750 gallons to 196,000,000 gallons. No change to the daily throughput rate is proposed; therefore, daily emissions will remain same.

PE2 =71.6 lb-VOC/day

= (0.08 lb-VOC/1,000 gal of organic liquid loaded)(196,000,000 gal/yr) = 15,680 lb-VOC/yr

Fugitive VOC emissions associated with the unit will remain same at 9,362 lb-VOC/yr. Thus,

PE2_{Total} = 15,680 lb-VOC/yr + 9,362 lb-VOC/yr = 25,042 lb-VOC/yr

<u>N-758-14-4</u>

Process:

The applicant has proposed to expand the use of this tank to store denatured ethanol and diesel in addition to the already permitted storage of gasoline product. Storing gasoline would result in the highest amount of emissions as opposed to denatured ethanol. Therefore, PE2 will be same PE1.

Other components:

Fugitive component emissions are estimated using the following equation and are summarized in the following table.

Component Turo	Course Ture	VOC	Component	PE2	
Component Type	Source Type	lb/hr/source	Count	lb/day	lb/yr
Valves	Gas	2.87E-05	0	0.00	0
Valves	Light Liquid	9.48E-05	22	0.05	18
Pump Seals	Gas	1.43E-04	0	0.00	0
	Light Liquid	1.19E-03	3	0.09	31
Others	Gas	2.65E-04	0	0.00	0
(compressors and others)	Light Liquid	2.87E-04	0	0.00	0
Fittings	Gas	9.26E-05	0	0.00	0
(connectors and flanges)	Light Liquid	1.76E-05	42	0.02	6
_ · · · · · · · · · · · · · · · · · · ·			Total:	0.16	55

PE2 = VOC (lb/hr/source) × component count × 24 hr/day = VOC (lb/hr/source) × component count × 8,760 hr/yr

 PE2_{Total}
 = PE2_{Tank} + PE2_{Components}

 = 28.9 lb-VOC/day + 0.2 lb-VOC/day

 = 29.1 lb-VOC/day

= 6,707 lb-VOC/yr + 55 lb-VOC/yr

= 6,762 lb-VOC/yr

N-758-16-0

Process:

EPA's TANKS 4.0.9d program is used to estimate the daily and annual emissions.

The daily emissions are estimated using the proposed monthly maximum throughput rate of 67,707,500 gal.

The annual emissions are estimated using the proposed annual maximum throughput rate of 162,802,140 gal.

PE2 = 1,736 lb-VOC/yr

Note that EPA's Tanks 4.0.9d program results are included in Appendix III of this document.

Other components:

Fugitive component emissions are estimated using the following equation and are summarized in the following table.

Occurrent Turns	Course Ture	VOC	Component	PE2	
Component Type	Source Type	lb/hr/source	Count	lb/day	lb/yr
Values	Gas	2.87E-05	0	0.00	0
Valves	Light Liquid	9.48E-05	26	0.06	22
Duma Caala	Gas	1.43E-04	0	0.00	0
Pump Seals	Light Liquid	1.19E-03	3	0.09	31
Others	Gas	2.65E-04	0	0.00	0
(compressors and others)	Light Liquid	2.87E-04	0	0.00	0
Fittings	Gas	9.26E-05	0	0.00	0
(connectors and flanges)	Light Liquid	1.76E-05	100	0.04	15
			Total:	0.19	68

PE2	= VOC (lb/hr/source) × component count × 24 hr/day
	= VOC (lb/hr/source) × component count × 8,760 hr/yr

PE2_{Total} = PE2_{Tank} + PE2_{Components} = 10.6 lb-VOC/day + 0.2 lb-VOC/day = **10.8 lb-VOC/day** = 1,736 lb-VOC/yr + 68 lb-VOC/yr = 1,804 lb-VOC/yr

3. Quarterly Emissions Changes (QECs)

This calculation is required for application's emission profile, which is used for the District's internal tracking purposes. In general, QECs are calculated as follows:

QEC = (PE2 - PE1)/4

Permit #	VOC (lb)					
	Q1	Q2	Q3	Q4		
N-758-4-5	76	76	76	76		
N-758-13-9	1,445	1,445	1,445	1,446		
N-758-14-4	9	10	10	10		
N-758-16-0	451	451	451	451		

4. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if BACT is required for emission units that are being modified. AIPE is calculated using the equations mentioned in Section 4.3 and 4.4 of Rule 2201.

$$AIPE = PE2 - \left(\frac{EF2}{EF1}\right)(PE1)$$

<u>N-758-4</u> Process: EF2 = EF1; therefore,

AIPE = PE2 - PE1 = 11.4 lb-VOC/day - 11.4 lb-VOC/day = 0.0 lb-VOC/day

Other components:

PE2 is less than 2.0 lb-VOC/day; therefore, AIPE must be less than 2.0 lb-VOC/day.

N-758-13EF2 = EF1; therefore,

AIPE = PE2 - PE1 = 71.6 lb-VOC/day - 71.6 lb-VOC/day = 0.0 lb-VOC/day Note that there is an increase in annual throughput rate, which is viewed as additional days of operation, and for each new day, the potential emissions (PE2) are over 2.0 lb-VOC/day.

 $\frac{N-758-14}{EF2}$ = EF1; therefore,

Process:

AIPE = PE2 - PE1

= 28.9 lb-VOC/day - 28.9 lb-VOC/day

= 0.0 lb-VOC/day

Other components:

PE2 is less than 2.0 lb-VOC/day; therefore, AIPE must be less than 2.0 lb-VOC/day.

<u>N-758-16</u>

This is a new emission unit. Therefore, AIPE calculations are not required.

- D. Facility Emissions
 - 1. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all emission units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Except for the permit units in this project, the potential emissions for each permit unit are taken from the application review of project N-1123688.

SSPE1 (lb/yr)						
Permit #	NOx	SOx	PM ₁₀	CO	VOC	
N-758-1-1	0	0	0	0	297	
N-758-2-1	0	0	0	0	353	
N-758-3-3 and '-7-3	0	0	0	: O	26,600	
N-758-4-4	0	0	0	0	2,464	
N-758-5-5	0	0	0	0	3,742	
N-758-6-2	0	0	0	0	6,583	

Permit #	NOx	SOx	PM ₁₀	CÔ	VOC
N-758-9-1	0	0	0	0	0 ³
N-758-10-2	0	0	0	0	03
N-758-11-2	0	0	0	0	0 ³
N-758-13-8	0	0	0	0	19,261
N-758-14-3	0	0	0	0	6,723
N-758-15-1	0	0	_0	0	9
ERC	0	0	0	0	0
Total	0	0	0	0	66,032

Equilon Enterprises LLC N-758-4-5, '-13-9, '-14-4 and '-16-0, N-1123247

2. Post-Project Stationary Source Potential to Emit (SSPE2)

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

SSPE2 (lb/yr)								
Permit #	NOx	SOx	PM ₁₀	CO	VOC			
N-758-1-1	0	0	0	0	297			
N-758-2-1	0	0	0	0	353			
N-758-3-3 and '-7-3	0	0	0	0	26,600			
N-758-4-5	0	0	0	0	2,768			
N-758-5-5	0	0	0	0	3,742			
N-758-6-2	0	0	0	0	6,583			
N-758-9-1	0	0	0	0	0			
N-758-10-2	0	0	0	0	0			
N-758-11-2	0	0	0	0	Ō			
N-758-13-9	0	0	0	Ō	25,042			
N-758-14-4	0	0	0	0	6,762			
N-758-15-1	0	0	0	0	9			
N-758-16-0	0	0	0	0	1,804			
ERC	0	0	0	0	0			
Total	0	0	0	0	73,960			

³VOC from permit units N-758-9, '-10 and '-11 are vented to the vapor recovery system under permit N-758-13. Therefore, VOC emissions from these units are counted toward permit unit N-758-13.

3. 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 Part 70.2

This facility operates bulk terminal where organic liquids (gasoline, diesel, denatured ethanol, etc.) are stored and loaded to tanker trucks to be distributed to the nearby gasoline dispensing facilities. This operation is subject to various NSPS (40 CFR Part 60) and NEHAPS (40 CFR Part 63). Therefore, fugitive emissions from this facility will be included in the SSPE balance for Major source determination.

Rule 2201 Major Source Determination (lb/year)								
Category NO _X SO _X PM ₁₀ CO VOC								
SSPE1	0	0	0	0	66,032			
SSPE2	0	0	0	0	73,960			
Major Source Thresholds	20,000	140,000	140,000	200,000	20,000			
Major Source?	No	No	No	No	Yes			

From the above table, it is determined that this facility is an existing Major Source and will remain Major Source for VOC emissions after the proposed project.

Rule 2410 Major Source Determination

The total gasoline storage capacity at this site is less than 300,000 barrels. Therefore, this facility does not qualify for a source category specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

Equilon Enterprises LLC N-758-4-5, '-13-9, '-14-4 and '-16-0, N-1123247

PSD Major Source Determination (tons/year)							
Category	NO ₂	VOC	SO ₂	CO	PM	PM10.	<u>CO2e</u>
Estimated Facility PE before Project Increase	0.0	33.0	0.0	0.0	0.0	0.0	14.9 ⁴
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source?	No .	Nŏ	⁻No	No	No	No	No

From the above table, this facility is not an existing Major Source under PSD.

4. Stationary Source Increase in Potential Emissions (SSIPE)

It is District Practice to define the SSIPE as the difference of SSPE2 and SSPE1. Negative SSIPE values are equated to zero.

Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NOx	0	<u> </u>	0
SOx	. O	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	73,960	66,032	7,928

5. SB-288 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit; and
- B. If a public notification is triggered (District Rule 2201, Section 5.4.1).

Per section VII.D.3 of this document, this facility is a Major Source for VOC emissions. Thus, analysis is required to determine if this project triggers an SB-288 Major Modification.

Total CO2e = 6.7 tons/yr + 8.2 tons/yr = 14.9 tons/yr

⁴CO2e (Storage Tanks) = (46,771 lb-VOC/yr, total for all tanks including fugilities) x (1.36 lb-CH4/100 lb-VOC taken from Appendix I, page 3 of Best Performance Standard for gasoline dispensing fecilities, assuming 1 lb-VOC = 1 lb-HC) x (21, global warming potential (GWP)) x (1 ton/2,000 lb) = 6.7 tons-CO2e/yr;

CO2e (loadout, N-758-13) = (1.07 lb-CH4/169,628 gal organic liquid loaded, source test September 2009) x 123,733,750 gal/yr, permitted loedout rate) x (21, GWP) x (1 tor/2,000 lb) = 8.2 tons-CO2e/yr

To determine if the proposed project triggers an SB-288 major modification, net emission increase (NEI) is calculated by determining the sum of the difference of PE2 and historical emissions (HE) of all the units involved in the project. This NEI value is then compared with the SB 288 Major Modification threshold of 50,000 lb-VOC/year.

 $\mathsf{NEI} = \sum(\mathsf{PE2} - \mathsf{HE})$

NEI would be highest if HE is set equal zero. Thus,

 $NEI = \sum PE2$ = PE2_{N-758-4-5} + PE2_{N-758-13-9} + PE2_{N-758-14-4} + PE2_{N-758-16-0} = (2,768 + 25,042 + 6,762 + 1,804) lb-VOC/yr = 36,376 lb-VOC/yr

The total VOC emissions from the units involved in the project are less than the SB 288 Major Modification threshold. Therefore, this project is not an SB 288 Major Modification.

6. 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.

<u>N-758-4-5</u>

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

Emission Increase = PAE – BAE - 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 (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

PAE = PE2_{N-758-4-5} = 2,768 lb-VOC/yr 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 (5 years for electric utility steam generating units). 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. BAE are determined using the emissions inventory data for the past two years 2010 and 2011. The average of these two year data is used to estimate the BAE for this unit.

BAE = $BAE_{N-758-4-4}$ = 609⁵ lb-VOC/yr

UBC: UBC is the portion of PAE that the emission units could have accommodated during the baseline period. This cannot be used in this project because the applicant has proposed to increase the utilization of this unit. Therefore,

UBC = 0 lb-VOC/yr

Emissions Increase	= PAE – BAE – UBC
	= 2,768 lb-VOC/yr – 609 lb-VOC/yr – 0 lb-VOC/yr
	= 2,159 lb-VOC/yr

<u>N-758-13-9</u>:

Emission Increase = PAE - BAE - UBC

Where, PAE = PE2_{N-758-13-9} (Process Only, not including fugitives as it is assumed to be same for pre and post project configurations) = 15,680 lb-VOC/yr BAE = 5,144 lb-VOC/yr⁶ UBC = 0 lb-VOC/yr

Emissions Increase = 15,680 lb-VOC/yr - 5,144 lb-VOC/yr - 0 lb-VOC/yr = 10,536 lb-VOC/yr

⁵BAE also includes 69 lb-VOC/yr emissions from other components including valves, flanges, connectors, etc.

⁶Based on the review of the emissions inventory data from 2007-2011, the highest amount of actual VOC emissions occurred in 2009 and 2010; therefore, 2009 and 2010 data are used here. The actual emissions are estimated using source test emission factor and loadout rate of gasoline and ethanol shown under permit N-758-9.

<u>N-758-14-4</u>

Process:

The proposed modification to include a capability to store denatured ethanol or diesel does not result in an increase in design capacity or potential to emit, and it does not impact the ability of any emission unit to operate at a higher utilization rate (and there are no increase in existing physical or legal limitations on the unit's ability to operate at a higher utilization rate), the emission increase from this unit is presumed to be 0.

Other components:

The emissions increase due to an increase in number of components is estimated to be 39 ib-VOC/yr.

<u>N-758-16-0</u>

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

Emissions Increase = 1,804 lb-VOC/yr

Summary:

The project's combined total VOC emission increase is 14,538 lb/yr (2,159 + 10,536 + 39 + 1,804), which exceed 0 lb/yr thresholds for Federal Major Modification. Therefore, this project is a Federal Major Modification.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

BACT requirements shall be triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions⁷:

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;

⁷Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of iess than 200,000 pounds per year of CO.

 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 in this rule.

<u>N-758-4-5</u>

Per section VII.C.4 of this document, AIPE from the proposed modifications is not greater than 2.0 pounds per day for VOC emissions.

However, the VOC emissions increase calculated under section VII.D.6 is greater than 0 lb/yr threshold for Federal Major Modification. Therefore, this unit triggers BACT for VOC emissions.

BACT guideline 7.3.3 requires 95% control for VOC emission using primary metal shoe seal with secondary wiper seal or equivalent. The tank is equipped with primary mechanical shoe and secondary wiper seals. Therefore, this unit meets the BACT requirements.

<u>N-758-13-9</u>

Per section VII.C.4 of this document, AIPE from the proposed modifications is not greater than 2.0 pounds per day for VOC emissions.

However, the proposed increase in annual throughput rate allows additional days of operation, and the PE2 for each of those days is 71.6 lb-VOC/day, greater than the 2.0 lb-VOC/day threshold. In addition, the VOC emissions increase calculated under section VII.D.6 is greater than 0 lb/yr threshold for Federal Major Modification. Therefore, this unit triggers BACT for VOC emissions.

BACT guideline 7.1.10 requires bottom loading with dry break couplers and vapor collection vented to a thermal incinerator or flare (or equivalent) with destruction efficiency of 99% or greater. The following conditions will ensure compliance with the BACT:

- All trucks shall be bottom loaded (or submerge loaded) using dry break couplers. [District Rules 2201 and 4102]
- VOC control efficiency of the carbon adsorber system shall be at least 99% on weight basis. [District Rules 2201 and 4102]

<u>N-758-14-4</u>

Per section VII.C.4 of this document, AIPE from the proposed modifications is not greater than 2.0 pounds per day. Furthermore, the VOC emissions increase calculated under section VII.D.6 is not greater than 0 lb/yr threshold for Federal Major Modification. Therefore, this unit does not trigger BACT for VOC emissions.

N-758-16-0

Per section VII C.2 of this document, PE2 is greater than 2.0 pounds per day for VOC emissions. Thus, this unit triggers BACT for VOC emissions.

BACT guideline 7.3.3 requires 95% control for VOC emission using primary metal shoe seal with secondary wiper seal or equivalent. The tank is equipped with primary mechanical shoe and secondary wiper seals. Therefore, this unit meets the BACT requirements.

Please refer to Appendix II for Top-Down BACT Analysis for permit units N-758-4, '-13, and '-16.

2. Offsets

This facility's total VOCs are above the offset threshold of 20,000 pounds per year. Therefore, offset calculations are required for this project.

Section 4.7.1 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

 $EOQ = \Sigma(PE2 - BE) + ICCE$, where

PE2 = Post-Project Potential to Emit BE = Baseline Emissions ICCE = Increase in Cargo Carrier emissions

There is no increase in Cargo Carrier emissions from this project. Thus,

 $EOQ = \Sigma(PE2 - BE)$

N-758-4 and '-14:

The storage tanks are clean emission unit as they both comply with the achieved-in-practice BACT standard, which is 95% control of VOC using primary mechanical seal and secondary wiper seals. Therefore, BE for these units is set equal to PE1.

N-758-14:

The proposed increase in VOC emissions is 0.2 lb/day, which is below 0.5 lb/day; therefore, this increase is equated to zero per District Policy APR-1130, and no offsets are required for this permit unit.

N-758-13:

The loading racks are served by a vapor collection and control system. These units are found to be clean emissions units as they comply with the achieved-inpractice BACT, which is bottom loading of trucks and use of control equipment capable of reducing at least 99% of VOC emissions. The existing carbon adsorber system was found to be 99.5% efficient in reducing VOC emissions during a test on September 29, 2011. Therefore, BE for this unit is set equal to PE1.

N-758-16-0:

The emission unit under this permit is a new emission unit; therefore, BE is set equal to 0.

Based on the above discussion, the total EOQ is summarized in the table below:

Permit #	PE2	PE1	EOQ
	(lb-VOC/yr)	(lb-VOC/yr)	(lb-VOC/yr)
N-758-4-5	2,768	2,464	304
N-758-13-9	25,042	19,261	5,781
N-758-14-4	-	-	0
N-758-16-0	1,804	0	1,804
	n an	EQQ:	7,889

Per section 4.8.1 of Rule 2201, for NO_x and VOC offsets for new Major Sources and Federal Major Modifications, the distance offset ratio shall be 1.5. This project triggers a Federal Major Modification. Therefore, the total amount of offset would be 11,834 pounds per year for VOC emissions (7,889 lb-VOC/yr × 1.5).

The applicant is in contract to purchase a total of 11,902 lb-VOC/yr (11,310 lb-VOC/yr from ERC S-3809-1, and 592 lb-VOC/yr from ERC N-1000-1) of Emission Reduction Credits (ERC) to offset the VOC emissions increase from this project. The amount is determined to be sufficient to offset the VOC emissions increase.

3. Public Notification

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications (SB -288, Federal)
- New emission units with a PE>100 lb/day of any one pollutant

- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant

Per section VII.D.6 of this document, this project is a Federal Major Modification. Therefore, 30-day public notice is required for this project.

4. Daily Emission Limits

Rule 2201 requires having daily emissions limit (DEL) in a permit. The proposed DELs are as follows:

<u>N-758-4-3</u>:

- VOC emissions from this tank shall not exceed 11.4 pounds in any one day. [District Rule 2201]
- Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the following limits: 0.2 lb/day and 69 lb/year. [District Rule 2201]

<u>N-758-13-9</u>:

- The facility shall be equipped with bottom loading and a vapor collection and control system such that the VOC emissions shall not exceed 0.08 pounds per 1,000 gallons of organic liquid loaded. [District Rules 2201 and 4624]
- The John Zink vapor processing unit is authorized to handle gasoline vapors from a total of no more than 895,000 gallons of gasoline throughput per day, nor 196,000,000 gallons of gasoline throughput in a 12 consecutive month rolling period. [District Rules 2201 and 4624]

<u>N-758-14-4</u>:

- VOC emissions from this tank shall not exceed 28.9 pounds in any one day. [District Rule 2201]
- Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the following limits: 0.2 lb/day and 55 lb/year. [District Rule 2201]

<u>N-758-16-0</u>:

 VOC emissions from this tank shall not exceed 10.6 pounds in any one day. [District Rule 2201] • Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the following limits: 0.2 lb/day and 68 lb/year. [District Rule 2201]

5. Compliance Assurance

Source Testing

N-758-4-5, '-14-4, and '-16-0:

Pursuant to District Policy APR-1705 (10/9/97), source testing is not required to demonstrate compliance with Rule 2201.

N-758-13-9:

Per District Policy APR-1705 (10/9/97), source testing is required for units equipped with carbon adsorption for control of VOCs upon initial startup and annually thereafter.

The conditions in PTO N-758-13-8 require annual testing of the carbon adsorber system. Therefore, these conditions will be replicated on this permit. No initial startup testing is required as the applicant is not proposing any physical changes to the equipment that would adversely affects its existing control efficiency.

Monitoring

N-758-4-5, '-14-4, and '-16-0:

The permittee is required to monitor RVP, temperature of the organic liquid, and throughput rate. These parameters can be used in the TANKS program to determine on-going compliance with the daily and annual limits in the permit.

N-758-13-9:

The conditions in PTO N-758-13-8 requires to use continuous monitoring system to measure and record the VOC emissions (and other parameters to determine compliance with 0.08 lb-VOC/1,000 gallon of organic limit) while gasoline vapors are vented to the carbon adsorber system. Thus, no additional monitoring is required.

Recordkeeping

N-758-4-5, '-14-4, and '-16-0:

The facility will be required to keep records of throughput, RVP, TVP, temperature of the organic liquid and throughput rate. These records are required to be maintained on-site for a period of at least five years.

N-758-13-9:

The facility will be required to keep records of throughput and monitoring data. These records are required to be maintained on-site for a period of at least five years.

Reporting N-758-4-5, '-13-9, '-14-4: No additional reporting is required. However, any existing reporting requirements will be replicated in these permits.

N-758-16-0: No reports are required for this unit.

6. Ambient Air Quality Analysis

Per Section 4.14 of Rule 2201, ambient air quality analysis (AAQA) shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse the violation of an Ambient Air Quality Standard (AAQS).

This project results in an increase in VOC emissions for which AAQS does not exist; therefore, AAQA is not performed for this project.

 Additional Requirements for new Major Sources and Federal Major Modifications

Per Section 4.15 of Rule 2201, "Compliance Certification" and "Alternative Siting Analysis" is required for any project, which constitutes a New Major Source or a Federal Major Modification.

Compliance Certification

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. The compliance certification from the facility is included in Appendix IV of this document.

Alternative Siting Analysis

This project involves about 12% increase in facility's potential VOC emissions, majority of which is merely due to the proposed operational changes. This project at the existing site is expected to result in the least possible impact to the environment as oppose to relocating the operations at an alternative site. Alternative sites would involve the relocation and/or construction of various

support structures and facilities on a much greater scale, and would therefore, result in a much greater impact.

Compliance is expected with this Rule.

Rule 2410 Prevention of Significant Deterioration

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)
- ČO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

Step1:

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not.

Per section VII.D.3 of this document, this facility is not an existing Major PSD source.

Step2:

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no futher analysis will be needed.

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.

Equilon Enterprises LLC N-758-4-5, '-13-9, '-14-4 and '-16-0, N-1123247

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)							
Category	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀	CO2e
Total PE from N-758- 4-5, '-13-9, '-14-4 and '-16-0	0.0	37.0	0.0	0.0	0.0	0.0	18.2 ⁸
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	No	No	No	No	No	No	No

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore, Rule 2410 is not applicable and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is a Major Source for VOC emissions. Therefore, this facility is subject to the requirements of this rule. The proposed project is a "significant modification" to the Title V permit, as the project is a Federal Major Modification. The facility has proposed to process this project with COC. The following conditions will be included in the permit:

- 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]
- 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]

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

Total CO2a = 5.2 tons/yr + 13 tons/yr = 18.2 tons/yr

^aCO2e (N-758-4, '-14-4 and '-16-0) = (36,376 lb-VOC/yr, total for all tanks including fugilives) x (1.36 lb-CH4/100 lb-VOC taken from Appendix I, page 3 of Best Performance Standard for gasoline dispensing facilities, assuming 1 lb-VOC = 1 lb-HC) x (21, global warming potential (GWP)) x (1 ton/2,000 lb) = 5.2 tons-CO2e/yr;

CO2e (loadout, N-758-13-9) = $(1.07 \text{ lb-CH4/169,828 gal organic liquid loaded, source test September 2009) x 198,000,000 gal/yr, permitted loadout rate) x (21, GWP) x (1 ton/2,000 lb) = 13 tons-CO2e/yr$

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix IV of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. The facility is expected to notify the District by filing TV Form-008 upon implementing the ATCs. The District Compliance Division is expected to submit a change order to implement ATCs into Permits to Operate (PTOs).

Compliance is expected with this Rule.

Rule 4001 New Source Performance Standards

40 CFR Part 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984

\$60.110b: Applicability and designation of affected facility

This subpart applies to each storage vessel with a capacity greater than 75 m³ (19,813 gal) that is used to store a volatile organic liquid for which construction, reconstruction, or modification is commenced after July 23, 1984. A storage vessel may be exempt from the requirements of this subpart as long as it qualifies §60.110b(b) or §60.110b(d), or meet alternate means of compliance in §60.110b(e).

N-758-4-5: 504,000 gallons (12,000 barrels) above ground internal floating roof tank

The storage capacity of this tank is greater than 75 m³ (19,813 gal), and the tank was installed after July 23,1984. Furthermore, the tank operation is modified under this project in a way that would result in an increase in VOC emissions. Therefore, this tank is subject to the requirements of this subpart.

The applicable requirements from this subpart are evaluated during the application review under project N1111745 (Initial Title V, 2/7/2013). These requirements will be replicated in ATC N-758-4-5. Therefore, continued compliance is expected with this subpart.

N-758-14-4: 689,139 gallons (16,408 barrels) external floating roof tank Based on the application review under project N1111745, this tank was installed before July 23, 1984⁹. Furthermore, the proposed modifications do not result in an increase in VOC emissions; therefore, this tank is not subject to the requirements of this subpart.

N-758-16-0: 2,226,000 gallons (53,000 barrels) internal floating roof tank The storage capacity of this tank is greater than 75 m³ (19,813 gal), and the tank will be modified to store gasoline or denatured ethanol, which results in an increase in VOC emissions. Since this modification occurs after the cut-off date of July 23, 1984, the tank is subject to the requirements of this subpart.

The requirements applicable to this tank are discussed in the following section:

§60.112b: Standard for volatile organic compounds (VOC)

This section requires to equip each storage vessel with systems listed in $\S60.112b(a)(1)$ (a fixed roof in combination with an internal floating roof) or $\S60.112b(a)(2)$ (an external floating roof) or 60.112b(a)(3) (a closed vent system and control device) or 60.112b(a)(4) (a system equivalent to (a)(1), (a)(2), or (a)(3)).

The storage tank is an internal floating roof tank. Therefore, this tank must meet the requirements in §60.112b(a)(1).

§60.112b(a)(1)(i) requires that the internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. The following condition will ensure compliance with this section:

• The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in

⁹Note that the tank under permit N-758-14 was instelled in 1953; therefore, it is not subject to 40 CFR Part 60 subparts K and Ka.

compliance with this rule before it may land the roof on its legs. [District Rule 4623 Section 5.4.3, 40 CFR 60.112b(a)(1)(i) and 63.11087(a)]

(1) (ii) requires that the internal floating roof shall be equipped with one of the closure devices provided in (1) (ii)(A), (1)(ii)(A), (1)(ii)(B), or (1)(ii)(C).

This tank is equipped with a mechanical shoe seal listed in (0.112b(a)). The equipment description includes mechanical shoe seal. Therefore, compliance is expected with this section.

§60.112b(a)(1)(iii) requires that each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. The following condition will ensure compliance with this section:

 Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623 Section 5.5.2.1.1, 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)]

§60.112b(a)(1)(iv) requires that each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. The following condition will ensure compliance with this section:

 Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 Section 5.5.2.1.2, 40 CFR 60.112b(a)(1)(iv) and 63.11087(a)]

 $\S60.112b(a)(1)(v)$ requires that automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. The following condition will ensure compliance with this section:

 Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 Section 5.5.2.1.3, 40 CFR 60.112b(a)(1)(v) and 63.11087(a)]

§60.112b(a)(1)(vi) requires that rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. The following condition will ensure compliance with this section:

 Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 Section 5.5.2.1.4, 40 CFR 60.112b(a)(1)(vi) and 63.11087(a)]

 $\S60.112b(a)(1)(vii)$ requires that each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The following condition will ensure compliance with this section:

 Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 Section 5.5.2.1.5, 40 CFR 60.112b(a)(1)(vii)]

§60.112b(a)(1)(viii) requires that each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The following condition will ensure compliance with this section:

• Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 Section 5.5.2.1.6, 40 CFR 60.112b(a)(1)(viii) and 63.11087(a)]

60.112b(a)(1)(ix) requires that each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. The following condition will ensure compliance with this section:

 Each penetration of the internal floating roof that allows for the passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix) and 63.11087(a)] §60.113b; Testing and procedures.

§60.113b(a)(1) requires that the owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with volatile organic liquid. If there are holes, tears or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. The following condition will ensure compliance with this section:

 The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623, Section 6.1.4.1, 40 CFR 60.113b(a)(1) and 63.11092(e)(1)]

§60.113b(a)(2) requires that the owner or operator shall visually inspect the internal floating roof and the primary seal, or the secondary and the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections cannot be repaired within 45 days and if the vessel cannot be emptied with 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. The following conditions will ensure compliance with this section:

 The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of rule 4623. [District Rule 4623 Section 6.1.4.2, 40 CFR 60.113b(a)(2) and 63.11092(e)(1)] • If any failure (i.e. visible organic liquid on the internal floating roof, tank walls or anywhere, holes or tears in the seal fabric) is detected during 12 month visual inspection, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If the detected failure cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the APCO in the inspection report. Such a request must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2) and 63.11092(e)(1)]

§60.113b(a)(5) requires that the owner or operator to notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by §60.113b(a)(1) of this section to afford the Administrator the opportunity to have an observer present. The following condition will ensure compliance with this section:

• The permittee shall notify the District in writing at least 30 days prior to conduct the visual inspection of the storage vessel, so the District can arrange an observer. [40 CFR 60.113b(a)(5) and 63.11092(e)(1)]

§60.115b: Reporting and recordkeeping requirements

 $\S60.115b(a)(1)$ requires that the owner or operator shall furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of $\S60.112b(a)(1)$ and $\S60.113b(a)(1)$. This report shall be an attachment to the notification required by $\S60.7(a)(3)$ (i.e. initial startup notification).

The reports required are a part of the initial startup notification followed after the installation of primary mechanical shoe and secondary wiper seals. Since the tank is already equipped with these seals, startup notification is not required.

(60.115b(a)(2)) requires that the owner or operator shall keep a record of each inspection performed as required by (60.113b(a)(1)) and (a)(2). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

60.115b(a)(3) requires that the owner or operator shall furnish a report to the Administrator within 30 days if any of the condition described in 60.113b(a)(2) are detected during annual visual inspection required by 60.113b(a)(2). The report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of the defect and date the repair was made.

The following condition will ensure compliance with §60.115b(a)(2) and (a)(3):

The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623] Section 6.3.5, 60.115b(a)(2), 60.115b(a)(3) and 63.11094(a)]

§60.116b: Monitoring of operations

§60.116b(a) requires the owner or operator to keep copies of all records for at least two years. However, Rule 4623, requires to keep all records are required to be kept for a period of at least five year. Therefore, compliance is expected with this section. The following condition will ensure compliance with this section:

• The permittee shall keep all records on-site for a period of at least five years. These records shall be made available for District inspection upon request. [District Rules 2201 and 4623, and 40 CFR 60.116b(a)]

§60.116b(b) requires the owner or operator to keep records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The following condition will ensure compliance with this section:

• The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(b)]

§60.116b(c) requires that except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m 3 (39,890 galions) storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa (0.5 psia) or with a design capacity greater than or equal to 75 m 3 but less than 151 m 3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. The following condition will ensure compliance with this section:

 The permittee shall maintain records of the volatile organic liquid stored, the period of storage, and TVP of that volatile organic liquid during the respective storage period. TVP shall be determined using the data on the Reid vapor pressure (highest receipt or highest tank sample results) and actual storage temperature. [District Rule 2201 and 40 CFR 60.116b(c)]

§60.116b(e)(1) refers to true vapor pressure requirements for vessels operated above or below ambient temperatures. Since these tanks are operated at ambient temperature, this section is not applicable.

§60.116b(e)(2)(i) requires that for crude oil or refined petroleum products the vapor pressure may be obtained by the available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendarmonth average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference— see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). The following condition will ensure compliance with this section:

 Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)]

§60.116b(e)(2)(ii) requires that the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

Since the tank is not used to store crude oil, requirements of this section are not applicable.

40 CFR Part 60 Subpart XX – Standards of Performance for Bulk Gasoline Terminals

This subpart is applicable to all of the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks and that commenced construction or modification after December 17, 1980.

The loading racks are covered under permits N-758-9 and '-10, which are not being modified as part of this project. Therefore, no further discussion is required.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

40 CFR Part 63 Subpart R – Gasoline Distribution Facilities (Bulk Gasoline terminals and Pipeline Breakout Stations

The potential Hazardous Air Pollutants (HAP) emissions from this facility are less than 10 tons/yr for single HAP and 25 tons/yr for combined HAPs¹⁰. Therefore, this facility is not becoming subject to the requirements of this subpart.

40 CFR Part 63 Subpart BBBBBB – Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities

This subpart establishes emission limitations and management practices for HAPs emitted from "area source" (i.e., not a Major HAP source) gasoline distribution bulk terminals, bulk plants and pipeline facilities.

§63.11081: Applicability

This subpart applies to each area source bulk gasoline terminal, pipeline breakout station, pipeline pumping station, and bulk gasoline plant identified below:

- 1. A bulk gasoline terminal that is not subject to the control requirements of 40 CFR Part 63 Subpart R or 40 CFR Part 63, Subpart CC.
- 2. A pipeline breakout station that is subject to the control requirements of 40 CFR Part 63 Subpart R.
- 3. A pipeline pumping station
- 4. A bulk gasoline plant

This terminal is not subject to 40 CFR Part 63 Subpart R (as determined above). Also, the terminal is not a part of petroleum refining process and is therefore not subject to 40 CFR Part 63, Subpart CC - National Emission Standards for

¹⁰Per EPA's document, Gasoline Distribution Industry (Stage I) – Background Information for Proposed Standards, EPA-453/R-97-002a, Table 3.1, totel HAPs to VOC ratio is 11% (by weight). The total VOC from this facility will be 73,960 lb/yr after the proposed project. This means, the amount of HAPs will be 8,136 lb/yr (4.07 tons/yr), which is less than the 25 tons/yr threshold for combined HAPs. Since the combined HAPs ere less than 10 tons/yr, the individual HAP must be less than 10 tons/yr.

Hazardous Air Pollutants From Petroleum Refineries. This facility is a bulk gasoline terminal (defined in 63.11100), and is an "area source" for HAP; therefore, it is subject to the requirements of this subpart.

§63.11082: Affected Sources

The emission sources to which this subpart applies are gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks, and equipment components in vapor or liquid gasoline service that meet the criteria specified In Table 1 through 3 to this subpart.

This gasoline terminal has the emissions units listed above. Therefore, these units are required to comply with this subpart.

Note that the latest revision to some sections of this subpart occurred on January 24, 2011. The District has conducted detailed analysis of this subpart under "Initial TV" project N-1111745 on February 7, 2013, and ensured that each permit at this facility including N-758-4, '-13 and '-14 has all applicable requirements to ensure on-going compliance with this subpart. These requirements will be replicated in ATCs N-758-4-5, '-13-9 and '-14-4. Therefore, continued compliance is expected with this subpart.

Requirements for tank N-758-16 are as follows:

§63.11087: Gasoline Storage Tanks

§63.11087(a) requires each gasoline storage tank to meet the emissions limit and management practices in Table 1 to this subpart.

The capacity of each of the gasoline storage tanks under these permit units is greater than 75 cubic meters (19,813 gallon). Therefore, these gasoline storage tanks must meet the requirements listed under §63.11100, Table 1, item 2, as follows:

- (a) Reduce emissions of total organic HAP or TOC by 95% (by weight) with a closed vent system and control device, as specified in § 60.112b(a)(3) of this chapter; or
- (b) equip each internal floating roof gasoline tank according to the requirements in 40 CFR Part 60 Subpart Kb, specifically, §60.112b(a)(1) except for the secondary seal requirement under §60.112b(a)(1)(ii)(B) and the requirements in §60.112b(a)(1)(iv) through (ix); and
- (c) equip each external roof gasoline storage tank according to the requirements in §60.112b(a)(2), except that the requirements of §60.112b(a)(2)(ii) shall only be required if such storage tank does not currently meet the requirements of §60.112b(a)(2)(i); or

(d) equip and operate each internal and external floating roof gasoline storage tank according to the applicable requirements in §63.1063(a)(1) and (b), and equip each external floating roof gasoline storage tank according to the requirements of §63.1063(a)(2) if such storage tank does not currently meet the requirements of §63.1063(a)(1).

The internal floating roof storage tank is equipped with mechanical shoe primary seals and secondary wiper seals that meet the requirements according to §60.112(b)(a)(1).

The following condition(s) will ensure compliance with this section:

- The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land the roof on its legs. [District Rule 4623 Section 5.4.3, 40 CFR 60.112b(a)(1)(i) and 63.11087(a)]
- Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623 Section 5.5.2.1.1, 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)]

§63.11087(c) requires the owner or operator to perform testing and monitoring specified in §63.11092(e)(1) through (e)(3). §63.11092(e)(1) requires the owner or operator of internal floating roof tanks to perform inspections of internal floating roof gasoline storage tank per §60.113b(a). The following condition(s) will ensure compliance with this section:

 The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623, Section 6.1.4.1, 40 CFR 60.113b(a)(1) and 63.11092(e)(1)]

- The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 Section 6.1.4.2, 40 CFR 60.113b(a)(2) and 63.11092(e)(1)]
- If any failure (i.e. visible organic liquid on the internal floating roof, tank walls or anywhere, holes or tears in the seal fabric) is detected during 12 month visual inspection, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If the detected failure cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the APCO in the inspection report. Such a request must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2) and 63.11092(e)(1)]
- The permittee shall notify the District in writing at least 30 days prior to conduct the visual inspection of the storage vessel, so the District can arrange an observer. [40 CFR 60.113b(a)(5) and 63.11092(e)(1)]

§63.11087(d) requires the owner or operator to submit the applicable notifications as required under §63.11093.

The permit application to obtain ATC permit to convert diesel tank into gasoline, and subsequent actions to implement the ATC would satisfy the requirements of this section. Therefore, no further discussion is necessary.

§63.11087(e) requires the owner or operator to keep records and submit reports as specified in §63.11094 and §63.11095. §63.11094(a) requires the owner or operator of internal floating roof tanks to keep records as specified in §60.115b(a). Similarly §63.11095(a)(1) requires the owner or operator of internal floating roof tanks to meet the reporting requirements as specified in §60.115b(a). The following condition(s) will ensure compliance with this section:

 The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623 Section 6.3.5, 60.115b(a)(2), 60.115b(a)(3) and 63.11094(a)]

Compliance is expected with this subpart.

Rule 4102 Nuisance

Section 4.0 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. The following condition will be placed on the permit.

• No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700

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.

Risk Management Review summary results are summarized in the following table:

Equilon Enterprises LLC N-758-4-5, '-13-9, '-14-4 and '-16-0, N-1123247

Risk Management Review Summary							
Categories	Tank (4-5)	VRS (13-9)	Tank (14-4)	Tank (16- <u>0</u>)	Project Totals	Facility Totals	
Prioritization Score	0.21	3.97	0.03	1.24	>1.0	<u>>1.0</u>	
Acute Hazard Index	0.00	0.00	0.00	0.00	0.00	0.00	
Chronic Hazard Index	0.00	0.00	0.00	0.00	0.00	0.00	
Maximum Individual Cancer Risk (10 ⁻⁶)	0.06	1.80	0.01	0.15	2.02	2.02	
T-BACT Required?	No	Yes	No	No			
Special Permit Conditions?	No	Yes	No	No	· .		

N-758-4-5, 14-4, and 16-0

The acute and chronic indices are below 1.0 and the cancer risk factors associated with these units are less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

N-758-13-9

The acute and chronic indices are below 1.0 and the cancer risk associated with unit N-758-13-9 is greater than 1.0 in a million, but less than 10 in a million. In accordance with the District's Risk Management Policy, the project is approved with Toxic Best Available Control Technology (T-BACT).

T-BACT Guidance

Per District Policy APR 1905 (3/2/2001), in order to control emissions of hazardous air pollutants to the maximum level achievable, applicants must apply Toxic Best Available Control Technology (T-BACT) to each new and modified emissions units with a greater than deminimus increase in cancer risk¹¹ or a greater than deminimus increase in non-cancer risk¹². T-BACT is the most stringent limitation or control technique for hazardous air pollutants of the following:

- Has been achieved in practice for such emissions unit and class of source; or
- Is contained in any State Implementation Plan approved by the Environmental Protection Agency for such emissions unit category and class of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed emissions unit demonstrates to the

¹¹ A deminimus increase in cancer risk is an increase in risk of one per million, as determined in section VIII of District Policy 1905.

¹² A deminimus increase in non-cancer risk is an increase in the hazard index of one, as determined in Section VII of District Policy 1905.

satisfaction of the APCO that such limitation or control technique is not presently achievable; or

- c. Is contained in any Federal Standard promulgated pursuant to FCAA Section 111 (NSPS) or Section 112 (MACT) for such emissions unit category and class of source; or
- d. Is any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be technologically feasible for such class or category of sources or for a specific source, and cost effective as determined by the District.

The proposed increase in throughput rate triggers T-BACT due to benzene emissions, which is a VOC. SJVUAPCD BACT guideline 7.1.10 for loading rack/switch loading is used to address T-BACT. This guideline requires the use of bottom loading with dry break couplers and vapor collection vented to a thermal incinerator or flare (or equivalent system) with destruction efficiency of 99% or more, as achieved-in-practice control. No technologically feasible option or alternative basic equipment is listed in the guideline.

T-BACT Analysis

Equilon is utilizing bottom loading of the trucks using dry break couplers. The applicant states that the existing carbon adsorber system is capable of reducing at least 99% of the VOC emissions. The following conditions will be included in permit N-758-13-9:

- All trucks shall be bottom loaded (or submerge loaded) using dry break coupiers. [District Rules 2201 and 4102]
- VOC control efficiency of the carbon adsorber system shall be at least 99% on weight basis. [District Rules 2201 and 4102]

Please refer to Appendix II for BACT/T-BACT analysis for permit unit N-758-13.

Compliance is expected with this Rule.

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids.

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

Note that this rule was amended on May 19, 2005. The District has conducted detailed analysis of this rule under "Initial TV" project N-1111745 on February 7, 2013, and ensured that emission units subject to this rule (including permits N-758-4 and '-14) contain all applicable requirements. These requirements will be replicated in ATCs N-758-4-5 and '-14-4. Therefore, continued compliance is expected with this rule.

Equilon has proposed to convert permit exempt diesel tank to store gasoline. The requirements for this tank (N-758-16-0) are discussed in the following section.

Section 5.1 of this rule requires Group C vessels (capacity greater than 39,600 gallons) storing liquids with a TVP of greater than 1.5 psia but less than 11 psia to be equipped with a floating roof or have vapor control installed.

The proposed tank is an internal floating roof tank, therefore the requirements of this section are satisfied.

Section 5.1.3 requires all tanks to be leak-free, as defined by Section 3.17 of the rule. The following condition will ensure compliance with this section:

A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]

Section 5.4.1, the internal floating roof tanks shall be equipped with seals that meet the criteria set forth in Section 5.3 except for complying with the requirement specified in Section 5.3.2.1.3.

The tank is a welded tank and is equipped with mechanical shoe-type design primary seal. Therefore, the tank must meet all the specifications listed in Section 5.3.2.1. The following conditions will ensure compliance with this section:

- No gap between the tank shell and the primary seal shall exceed 1-1/2 inches. [District Rule 4623]
- The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623]

- The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623]
- No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623]
- The cumulative length of all gaps between the tank shell and the secondary seal, 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623]
- The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623]
- The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623]
- There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623]
- The secondary seal shall allow easy insertion of probes of up to 1-1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623]
- The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623]

Section 5.4.3 requires the owner or operator to comply with floating roof landing requirements specified in Section 5.3.1.3. The following condition will ensure compliance with this section:

• The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land the roof on its legs. [District Rule 4623 Section 5.4.3, 40 CFR 60.112b(a)(1)(i) and 63.11087(a)]

Section 5.5.1 requires that all openings in the roof used for sampling and gauging, except pressure-vacuum valves complying with Section 5.2, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained organic vapor from escaping from the liquid contents of the tank. The tank shall be equipped with a cover, seal or lid. The following condition will ensure compliance with this section:

All openings in the roof used for sampling and gauging shall provide a
projection below the liquid surface to prevent belching of liquid and to prevent
entrained or formed organic vapor from escaping from the liquid contents of the
tank and shall be equipped with a cover, seal or lid. The cover seal or lid shall
be in a closed position, with no visible gaps and be gas tight, except when the
device or appurtenance is in use. [District Rule 4623]

Section 5.5.2.1 requires that internal floating roof deck fittings shall meet all the requirements specified in Section 5.5.2.1.1 through 5.5.2.1.6. The following conditions will ensure compliance with this section:

- Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623 Section 5.5.2.1.1, 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)]
- Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 Section 5.5.2.1.2, 40 CFR 60.112b(a)(1)(iv) and 63.11087(a)]
- Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 Section 5.5.2.1.3, 40 CFR 60.112b(a)(1)(v) and 63.11087(a)]
- Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 Section 5.5.2.1.4, 40 CFR 60.112b(a)(1)(vi) and 63.11087(a)]

- Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 Section 5.5.2.1.5, 40 CFR 60.112b(a)(1)(vii)]
- Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 Section 5.5.2.1.6, 40 CFR 60.112b(a)(1)(viii) and 63.11087(a)]

Sections 5.5.2.3 and 5.5.2.4 list requirements for solid guidepole and slotted guidepole respectively. The following conditions will ensure compliance with this section:

- For solid guidepole, all solid sampling or gauging wells, and similar fixed projections through the floating roof such as anti-rotational pipe shall provide a projection below the liquid surface. [District Rule 4623]
- For solid guidepole, the gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall not exceed 1/2 inch. [District Rule 4623]
- For slotted guidepole, all slotted sampling or gauging wells, and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623]
- For slotted guidepole, gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall not exceed 1/8 inch. [District Rule 4623]

Section 6.1.4 requires the owner or operator shall perform a visually inspections, and conduct actual gap measurements according to the timelines specified in this section. The following conditions will ensure compliance with this section:

 The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623, 40 CFR 60.113b(a)(1) and 63.11092(e)(1)]

- The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of rule 4623. [District Rule 4623, 40 CFR 60.113b(a)(2) and 63.11092(e)(1)]
- The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. Other than the gap criteria specified by this permit, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found shall constitute a violation of this rule. [District Rule 4623]

Section 6.2 requires TVP and API gravity testing of stored organic liquid in uncontrolled fixed roof tank.

The storage tank is an internal floating roof tank. Therefore, this tank is not subject to the requirements of this section.

Section 6.3 requires the owner or operator shall retain accurate records required by this rule for a period of five years. The tank is subject to the requirements of Section 6.3.5. The following conditions will ensure compliance with this section:

The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of

defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623; 40 CFR 60.115b(a)(2), 60.115b(a)(3), and 63.11094(a)]

• The permittee shall maintain all records required by this permit for a period of at least five years and shall make them readily available for District inspection upon request. [District Rules 2201 and 4623, and 40 CFR 60.116b(a) [District Rules 2201 and 4623]

Section 6.3.7 requires an operator to maintain records of the external floating roof or internal floating roof landing activities. The following conditions will ensure compliance with this section:

 The permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Section 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623]

Compliance is expected with this Rule.

Rule 4624 Transfer of Organic Liquid

This rule was amended on December 20, 2007. The District has conducted detailed analysis of this rule under "Initial TV" project N-1111745 on February 7, 2013, and ensured that permits for the emissions units subject to this rule (N-758-9, '-10 and '-13) contains all applicable requirements. These requirements will be replicated in ATC N-758-13-9 associated with this project. Therefore, continued compliance is expected with this rule.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (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 orderiy evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (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.
- 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.

This proposed project results in an increase in 7.9 m-tons of CO₂/yr¹³. This increase is below the zero equivalency level of 230 m-tons of CO2e/yr in District's Zero Equivalency Policy for Greenhouse Gases (APR-2015). Thus, the proposed project is presumed to 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 § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA

¹³Permits N-758-4-4 and -14-3 (total) = (9,187 lb-VOC/yr, total for all tanks including fugitives) x (1.36 lb-CH4/100 lb-VOC taken from Appendix I, page 3 of Best Performance Standard for gasoline dispensing facilities, assuming 1 ib-VOC = 1 lb-HC) x (21, global warming potential (GWP)) x (1 ton/2,000 lb) = 1.3 tons-CO2e/yr; Permit N-758-13-8 = (1.07 lb-CH4/169,828 gal organic liquid loaded, source test Septembar 2009) x 123,733,750 gal/yr, permitted loadout rate) x (21, GWP) x (1 ton/2,000 lb) = 6.2 tons-CO2e/yr; Total Pre-Project CO2e = 1.3 tons/yr + 8.2 tons/yr = 9.5 tons/yr; Total Post-Project CO2e (footnote on page 26) = 18.2 tons/yr; Increasa CO2e = 18.2 - 9.5 = 8.7 tons-CO2e/yr, or 7.9 metric tons/yr (8.7 short tons/yr x 0.9072 metric tons/short ton)

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. Therefore, issuance of Authorities to Construct N-758-4-5, '-13-9, '-14-4 and '-16-0 is recommend after addressing comments from the EPA, ARB and the public.

X. Billing information

1 M						
Permit #	Fee Schedule	Fee Description	Previous Fee Schedule			
N-758-4-5	3020-05 F	504,000 gallon tank	3020-05 F			
N-758-13-9	3020-01 C	63 hp	3020-01 C			
N-758-14-4	3020-05 F	689,136 gallon tank	3020-05 F			
N-758-16-0 3020-05 F		2,226,000 gallon tank	None			

Appendices

Appendix I: Draft Authority to Construct Permits

Appendix II: Top-Down BACT Analysis and BACT Guidelines

Appendix III: Tanks 4.0.9d Emissions Reports

Appendix IV: Compliance Certification

Appendix V: Risk Management Review Summary

Appendix VI: Permits to Operate N-758-4-4, '-13-8 and '-14-3

Appendix I Draft Authority to Construct Permits

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San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-758-4-5

LEGAL OWNER OR OPERATOR: EQUILON ENTERPRISES LLC MAILING ADDRESS: SHELL OIL PRODUCTS US AT

EQUILON ENTERPRISES LLC SHELL OIL PRODUCTS US ATTN: ENV COORD 2555 13TH AVENUE SW SEATTLE, WA 98134

LOCATION:

ROUGH & READY ISLAND STOCKTON, CA 95203

EQUIPMENT DESCRIPTION:

MODIFICATION OF ONE 504,000 GALLON (12,000 BBL) ABOVEGROUND INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL STORAGE TANK #19 WITH A PRIMARY MECHANICAL SHOE TYPE SEAL AND SECONDARY RIM-MOUNTED WIPER SEAL: TO INCREASE MONTHLY THROUGHPUT RATE

CONDITIONS

- (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. VOC emissions from this tank shall not exceed 11.4 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. VOC emissions from this tank shall not exceed 2,699 pounds in any 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU <u>MUST</u> NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NDT a PERMIT TO OPERATE. Approval or denisi 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 oparated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control Oistrict. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shell expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all lawa, ordinances and regulations of <u>pall-other</u> governmental agencies which may parter in to the above equipment.

Seyed Sadredin, Executive PCO

DAVID WARNER-Director of Permit Services N-784-8 - Nov 18 2013 1, 16PM - KAHLONU , Juni Impedian MDT Required

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

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- 5. The permittee shall maintain records sufficient to demonstrate compliance with each emission limit. These records shall contain each process variable used (e.g., throughput, RVP, etc.) in estimating VOC emissions from this tank and actual process variables (e.g. throughput, RVP, etc.) of this tank. The process variables used in estimating the emissions shall be compared to that of the actual process variables to demonstrate compliance with each emission limit. The permittee may also use EPA's Tanks program (or other District accepted methodologies) with actual process variables to demonstrate compliance with each emission limit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the following limits: 0.2 lb/day and 69 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC emissions from component leaks shall be calculated using component count and appropriate emission factors from "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-1b (Feb 1999) - Marketing Terminal. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. Throughput of organic liquid for this tank shall not exceed any of the following limits: 504,000 gallons/day and 7,560,000 gallons/month. [District Rule 2201] Federally Enforceable Through Title V Permi
- 9. True vapor pressure (TVP) of the liquid stored in this tank shall be less than 11 psia. [District Rule 4623] Federally Enforceable Through Title V Permit
- 10. The owner or operator shall determine RVP and the temperature of the organic liquid stored on monthly basis. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 11. The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land the roof on its legs. [District Rule 4623; 40 CFR 60.112b(a)(1)(i) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 12. No gap between the tank shell and the primary seal shall exceed 1-1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
- 13. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 14. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 15. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 18. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 19. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
- 20. There shall be no holes, tears, or openings in the secondary sont on in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623 and 40 CFR 60.113b(b)(4)(i)(B) and (ii)(C)] Federally Encorrectly integrable [Integration of the content of the con

CONDITIONS CONTINUE ON NEXT PAGE

- 21. The secondary seal shall allow easy insertion of probes of up to 1-1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 22. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 23. All openings in the roof used for sampling and gauging, except pressure-vacuum relief valve, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 24. The tank shall be operated in a leak-free condition. The pressure-vacuum relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
- 25. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 26. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623; 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 27. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623; 40 CFR 60.112b(a)(1)(iv) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 28. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623; 40 CFR 60.112b(a)(1)(v) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 29. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623; 40 CFR 60.112b(a)(1)(vi) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 30. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(vii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 31. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(viii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 32. Each penetration of the internal floating roof that allows for the passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 33. All solid sampling or gauging wells, and similar fixed projections through the floating roof such as anti-rotational pipe shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 34. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in ho case shall not exceed one-half (1/2) inch. [District Rule 4623] Federally Enforceable Through Title V Period 1

- 35. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623; 40 CFR 60.113b(a)(1) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 36. The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of rule 4623. [District Rule 4623; 40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 37. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. Other than the gap criteria specified by this permit, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found shall constitute a violation of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
- 38. If any failure (i.e. visible organic liquid on the internal floating roof, tank walls or anywhere, holes or tears in the seal fabric) is detected during 12 month visual inspection, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If the detected failure cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the APCO in the inspection report. Such a request must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 39. The permittee shall notify the District in writing at least 30 days prior to conducting the visual inspection of the storage vessel, so the District can arrange an observer. [40 CFR 60.113b(a)(5) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 40. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623; 40 CFR 60.115b(a)(2), 60.115b(a)(3), and 63.11094(a)] Federally Enforceable Through Title V Permit
- 41. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain records of the volatile organic liquid stored, the period of storage, and TVP of that volatile organic liquid during the respective storage period. TVP shall be determined using the data on the Reid vapor pressure (highest receipt or highest tank sample results) and actual storage temperature. [District Rule 2201 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

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- 43. (2623) Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
- 44. The permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Section 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 45. The permittee shall maintain records of daily and monthly organic liquid throughput in gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 46. The permittee shall maintain all records required by this permit for a period of at least five years and shall make them readily available for District inspection upon request. [District Rules 2201 and 4623, and 40 CFR 60.116b(a)] Federally Enforceable Through Title V Permit
- 47. Prior to operating under this Authority to Construct, the permittee shall mitigate the following quantities of VOC: 1st quarter: 76 lb, 2nd quarter: 76 lb, 3rd quarter: 76 lb, and 4th quarter: 76 lb. Offsets shall be provided at the applicable offset ratio specified in Section 4.8.1 of Rule 2201 (as amended 4/21/11) [District Rule 2201] Federally Enforceable Through Title V Permit
- 48. VOC ERC S-3809-1 and N-1000-1 (or a certificate split from any of these certificates) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-758-13-9

MAILING ADDRESS:

LEGAL OWNER OR OPERATOR: EQUILON ENTERPRISES LLC SHELL OIL PRODUCTS US ATTN: ENV COORD 2555 13TH AVENUE SW SEATTLE, WA 98134

LOCATION:

ROUGH & READY ISLAND STOCKTON, CA 95203

EQUIPMENT DESCRIPTION:

MODIFICATION OF ONE JOHN ZINK VAPOR RECOVERY SYSTEM, CARBON ADSORPTION UNIT, MODEL #AA1218715B AND VAPOR BLADDER TANK #16 IN THE VAPOR RECOVERY LINE BEFORE THE VAPOR RECOVERY SYSTEM: TO INCREASE ANNUAL THROUGHPUT RATE

CONDITIONS

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 1. 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
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an 2. 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
- No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are 3. displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621] Federally Enforceable Through Title V Permit
- 4. The vapor collection and control system shall operate such that the pressure in the delivery tank being loaded shall not exceed 18 inches water column pressure and 6 inches water column vacuum. [District Rule 4624] Federally Enforceable Through Title V Permit
- 5. The transfer rack and vapor collection equipment shall be maintained and operated such that there are no leaks and no excess organic liquid drainage at disconnections. [District Rule 4624] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT & PERMIT TO OPERATE. Approvel 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 eli 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 eil laws, ordinances and regulations of all-other governmentel agencies which may pertain to the above equipment.

Seyad Sadredin, Executive **APCO**

DAVID WARNER, Director of Permit Services

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- The John Zink vapor processing unit shall have two operational carbon adsorption columns. Each column shall be 6. regenerated every 15 minutes when the device is in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
- The vapors from the facility's fixed roof tanks and loading rack may bypass the bladder tank (Tank #16) only during 7. periods of time when the bladder tank is down for maintenance, repairs, breakdowns, inspection of the bladder tank, or degassing of the bladder tank. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC emissions from this unit shall not exceed 9,362 lb-VOC/yr. [District Rule 2201] Federally Enforceable 8. Through Title V Permit
- Vapor return hose(s) shall connect displaced vapors from the truck to the vapor control system whenever tank truck, 9. trailer, or car is loading organic liquid. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 10. Vapor return hose(s) and connections between the tanker truck, trailer, or car and the vapor control system shall be leak-free. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 11. The facility shall be equipped with bottom loading and a vapor collection and control system such that the VOC emissions shall not exceed 0.08 pounds per 1,000 gallons of organic liquid loaded. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 12. The John Zink vapor processing unit is authorized to handle gasoline vapors from a total of no more than 895,000 gallons of gasoline throughput per day, nor 196,000,000 gallons of gasoline throughput in a 12 consecutive month rolling period. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 13. All trucks shall be bottom loaded (or submerge loaded) using dry break couplers. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
- 14. VOC control efficiency of the carbon adsorber system shall be at least 99% on weight basis [District Rules 220] and 41021
- 15. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
- 16. Source testing to demonstrate compliance with permit conditions and all rules and regulations, when the bladder tank is on-line, shall be conducted on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 18. Compliance with the VOC emissions limit shall be determined using 40 CFR 60.503 "Test Methods and Procedures" and EPA Methods 2A, 2B, 25A and 25B and ARB Method 422, or ARB Test Procedure TP-203.1. [District Rule 4624] Federally Enforceable Through Title V Permit
- 19. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
- 20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 108]] Federally Enforceable Through Title V Permit
- 21. The owner or operator shall calibrate, certify, and maintain, and quality-assure a Continuous Monitoring System (CMS) which continuously measures and records the VOCs (and other parameters, if any, to determine compliance with lb-VOC/1,000 gallon of organic liquid) while gasoline vapors are displaced to the John Zink carbon adsorption system. [District Rule 1080 and 40 CFR 63.11092(b)] Federally Enforceable Through Title V Permit
- 22. The CMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. The CMS shall meet the requirements in 40 CFR-60 Appendix B Performance Specification 8 (PS 8) or 8A (PS 8), as appropriate, or shall meet equivalent specification Sestablished by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080] Federally Enforceable Through Vide V Permit CONDITIONS CONTINUE ON NEXT PAGE

- 24. The CMS must be audited at least once every six months by conducting cylinder gas audits (CGA) using the procedure in 40 CFR Part 60 Appendix F, 5.1.2. Audit reports shall be submitted along with semi-annual compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 25. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
- 26. The CMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 27. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 28. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rule 1080] Federally Enforceable Through Title V Permit
- 29. The owner or operator shall submit a written report of CMS operations on semi-annual basis to the District. The report shall include the following: Date, time intervals, data and magnitude of excess emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CMS was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
- 30. A leak is defined as the dripping of VOC-containing liquid at a rate of more than 3 drops per minute, or the detection of any gaseous or vapor emissions with a concentration of VOC greater than 10,000 ppmv as methane above a background when measured using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
- 31. Excess organic liquid drainage is defined as an average of more than 10 milliliters liquid drainage per disconnect from three consecutive disconnects. [District Rule 4624] Federally Enforceable Through Title V Permit
- 32. The operator shall inspect the vapor collection system, the vapor disposal system, and each transfer rack handling organic liquids for leaks during transfer at least once every calendar quarter using the EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
- 33. All leaking components shall be repaired or replaced within 72 hours of discovery. If the leaking component cannot be repaired or replaced within 72 hours, the component shall be taken out of service until such time the component is repaired or replaced. The repaired or replacement equipment shall be reinspected the first time the equipment is in operation after the repair or replacement. [District Rule 4624] Federally Enforceable Through Title V Permit
- 34. The operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection, the inspection frequency shall revert back to quarterly, and the operator shall contact the APCO in writing within 14 days. [District Rule 4624] Federally Enforceable Through Title V Permit
- 35. Each activated carbon adsorption column shall be equipped with an operational pressure differential gauge. The optimum pressure for each column shall be determined after source testing. [District Rule 4624] Federally Enforceable Through Title V Permit
- 36. The permittee shall maintain records of all maintenance, repair, breakdown, tank inspection and testing, and degassing of the bladder tank events when the vapors are not first sent to the bladder tank and are sent directly to the John Zink vapor processing unit. These records shall indicate the times, dates and reasons why the bladder tank was off-line. [District Rule 2201] Federally Enforceable Through Title V. Permit

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- 37. The permittee shall maintain records of the daily, monthly, 12-month total gasoline throughput, in gallons, and results of required leak inspections. These records shall be retained for a minimum of five years and shall be made available for District inspection upon request. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 38. Prior to operating under this Authority to Construct, the permittee shall mitigate the following quantities of VOC: 1st quarter: 1,445 lb, 2nd quarter: 1,445 lb, 3rd quarter: 1,445 lb, and 4th quarter: 1,446 lb. Offsets shall be provided at the applicable offset ratio specified in Section 4.8.1 of Rule 2201 (as amended 4/21/11) [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. VOC ERC S-3809-1 and N-1000-1 (or a certificate split from any of these certificates) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-758-14-4

MAILING ADDRESS:

LEGAL OWNER OR OPERATOR: EQUILON ENTERPRISES LLC SHELL OIL PRODUCTS US ATTN: ENV COORD 2555 13TH AVENUE SW SEATTLE, WA 98134

LOCATION:

ROUGH & READY ISLAND STOCKTON, CA 95203

EQUIPMENT DESCRIPTION:

MODIFICATION OF ONE 689,136 GALLON (16,408 BBL) ABOVEGROUND WELDED EXTERNAL FLOATING ROOF GASOLINE STORAGE TANK (TANK #18) WITH A MECHANICAL SHOE TYPE PRIMARY SEAL AND A SECONDARY WIPE SEAL: ALLOW STORAGE OF DIESEL AND DENATURED ETHANOL IN ADDITION TO GASOLINE STORAGE

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. VOC emissions from this tank shall not exceed 28.9 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- VOC emissions from this tank shall not exceed 6,707 pounds in any 12 consecutive month rolling period. [District 4. Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT & PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be mede efter an inspection to verify that the soulpment 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 pureuant to Rule 2050, this Authority to Construct shall expire and application shall be cancellad two years from tha date of issuance. The applicant is reaponsible for complying with all laws, ordinances and regulations of the governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Dilector **PCO**

DAVID WARNER, Director of Permit Services

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- The permittee shall maintain records sufficient to demonstrate compliance with each emission limit. These records 5. shall contain each process variable used (e.g., throughput, RVP, etc.) in estimating VOC emissions from this tank and actual process variables (e.g. throughput, RVP, etc.) of this tank. The process variables used in estimating the emissions shall be compared to that of the actual process variables to demonstrate compliance with each emission limit. The permittee may also use EPA's Tanks program (or other District accepted methodologies) with actual process variables to demonstrate compliance with each emission limit. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the 6. following limits: 0.2 lb/day and 55 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC emissions from component leaks shall be calculated using component count and appropriate emission 7. factors from "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-1b (Feb 1999) - Marketing Terminal. [District Rule 2201] Federally Enforceable Through Title V Permit
- Throughput of organic liquid for this tank shall not exceed any of the following limits: 698,136 gallons/day, 8. 20,961,220 gallons/month and 50,952,827 gallons/year based on a 12-month rolling basis. [District Rule 2201] Federally Enforceable Through Title V Permit
- True vapor pressure (TVP) of the liquid stored in this tank shall be less than 11 psia. [District Rule 4623] Federally 9. Enforceable Through Title V Permit
- 10. The owner or operator shall determine RVP and the temperature of the organic liquid (except diesel) stored on monthly basis. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 11. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 12. The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 13. Gaps between the tank shell and the primary seal shall not exceed 1-1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
- 14. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank, [District Rule 4623] Federally Enforceable Through Title V Permit
- 15. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 16. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 17. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 18. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.0 inch2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623 and 40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 19. If the primary seal used is a metallic shoe, one end of the metallie shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 inches) above the stored liquid surface. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Trite V. Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 20. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
- 21. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 22. The secondary seal shall allow easy insertion of probes of up to 1-1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 23. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 24. All openings in the roof used for sampling and gauging, except pressure-vacuum relief valve, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 25. The tank shall be in a leak-free condition. The pressure-vacuum relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
- 26. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 27. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 28. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 29. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 30. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 31. Each emergency roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. The fabric cover must be impermeable if the liquid is drained into the contents of the tanks. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 32. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623] Federally Enforceable Through Title V Permit
- 33. All wells and similar fixed projections through the floating root shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title VPertuit

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- 34. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 35. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 36. The slotted guidepole well on a external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 37. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 38. The permittee of external floating roof tanks shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 39. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 40. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- If unit is out of service for a period of one year or more, subsequent refilling with gasoline shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 42. Operator shall determine gap widths and gap areas for compliance with 40 CFR 60.113b(b)(2) and (3) in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off roof leg supports; 2) Measure seal gaps around entire circumference of the tank in each place where a 0.32 cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3) Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; and 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 43. If the seals do not meet the required specifications of 40 CFR 60.113b(b)(4)(i) and (ii), operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 44. Operator shall notify the APCO 30 days in advance of any gap measurements required by 40 CFR 63.11092(e)(2) and 40 CFR 60.113b(b) to afford the APCO opportunity to have an observer present. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 45. After the tank has been emptied and degassed, if the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with gasoline. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Perinit (D)

CONDITIONS CONTINUE ON NEXT PAGE

- 46. For all visual inspections required by 40 CFR 63.11092(e)(2), the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 47. If a visual inspection required by 40 CFR 63.11092(e)(2) is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 48. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 49. Within 30 days of the end of each semi-annual period, the operator shall include in the report required by 40 CFR 63.11095(a) the following information regarding gap measurements: the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by 40 CFR 63.11092(e)(2). [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 50. Within 30 days of the end of each semi-annual period, the operator shall include in the report required by 40 CFR 63.11095(a) the following information regarding gap measurements that exceeded 40 CFR 60.113b(4) limits: the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by 40 CFR 63.1192(e)(2), and the date the vessel was emptied or the repairs made and the date of repair. [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 51. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 52. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
- 53. The permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 54. The permittee shall maintain records of the volatile organic liquid stored, the period of storage, and TVP of that volatile organic liquid during the respective storage period. TVP shall be determined using the data on the Reid vapor pressure (highest receipt or highest tank sample results) and actual storage temperature. [District Rule 2201] Federally Enforceable Through Title V Permit
- 55. The permittee shall maintain records of daily, monthly and annual (12-month rolling total) organic liquid throughput in gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 56. The permittee shall maintain all records required by this permit for a period of at least five years and shall make them readily available for District inspection upon request. [District Rule 4623 and 40 CFR 63.11094(a)] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-758-16-0

LEGAL OWNER OR OPERATOR: EQUILON ENTERPRISES LLC MAILING ADDRESS: SHELL OIL PRODUCTS US AT

EQUILON ENTERPRISES LLC SHELL OIL PRODUCTS US ATTN: ENV COORD 2555 13TH AVENUE SW SEATTLE; WA 98134

LOCATION:

ROUGH & READY ISLAND STOCKTON, CA 95203

EQUIPMENT DESCRIPTION:

ONE 2,226,000 GALLON (53,000 BBL) WELDED INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL/DIESEL STORAGE TANK (TANK #24) WITH A MECHANICAL SHOE PRIMARY SEAL AND A SECONDARY RIM-MOUNTED WIPER SEAL

CONDITIONS

- {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. VOC emissions from this tank shall not exceed 10.6 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. VOC emissions from this tank shall not exceed 1,736 pounds in any 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU <u>MUST</u> NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZEO 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 varify their the equipment has been constructed in accordance with the epproved plens, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with ell Rules end Regulations of the San Joaquin Velley Unified Air Pollution Control District. Unless construction has commanced pursuent to Rule 2050, this Authority to Construct shall expire and application shall be cancalled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of gilletter governmental agencies which may partain to the above equipment.

Seyed Sadredin, Executiv ΣPCO

DAVID WARNER-Director of Permit Services N-764-14-0 Nev-18 2013 1 USPM - KARLONJ Junit Impetted NOT Resulted

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

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- 5. The permittee shall maintain records sufficient to demonstrate compliance with each emission limit. These records shall contain each process variable used (e.g., throughput, RVP, etc.) in estimating VOC emissions from this tank and actual process variables (e.g. throughput, RVP, etc.) of this tank. The process variables used in estimating the emissions shall be compared to that of the actual process variables to demonstrate compliance with each emission limit. The permittee may also use EPA's Tanks program (or other District accepted methodologies) with actual process variables to demonstrate compliance with each emission limit. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. Fugitive VOC from valves, flanges, connector, pump seals etc., associated with this tank shall not exceed any of the following limits: 0.2 lb/day and 68 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC emissions from component leaks shall be calculated using component count and appropriate emission factors from "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-1b (Feb 1999) - Marketing Terminal. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. Throughput of organic liquid for this tank shall not exceed any of the following limits: 2,256,917 gallons/day and 13,566,845 gallons/month. [District Rule 2201] Federally Enforceable Through Title V Permit
- 9. True vapor pressure (TVP) of the liquid stored in this tank shall be less than 11 psia. [District Rule 4623] Federally Enforceable Through Title V Permit
- 10. The owner or operator shall determine RVP and the temperature of the organic liquid stored on monthly basis. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
- 11. The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land the roof on its legs. [District Rule 4623; 40 CFR 60.112b(a)(1)(i) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 12. No gap between the tank shell and the primary seal shall exceed 1-1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
- 13. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 14. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 15. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 16. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 17. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 18. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 19. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
- 20. There shall be no holes, tears, or openings in the secondary soal on in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal abrie, and secondary seal. [District Rule 4623 and 40 CFR 60.1 13b(b)(4)(i)(B) and (ii)(C)] Federally Enforced by [Jindugh Title V Permit

- 21. The secondary seal shall allow easy insertion of probes of up to 1-1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 22. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 23. All openings in the roof used for sampling and gauging, except pressure-vacuum relief valve, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 24. The tank shall be operated in a leak-free condition. The pressure-vacuum relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
- 25. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 26. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623; 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 27. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623; 40 CFR 60.112b(a)(1)(iv) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 28. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623; 40 CFR 60.112b(a)(1)(v) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 29. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623; 40 CFR 60.112b(a)(1)(vi) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 30. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(vii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 31. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(viii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 32. Each penetration of the internal floating roof that allows for the passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 33. For solid guidepole, all solid sampling or gauging wells, and similar fixed projections through the floating roof such as anti-rotational pipe shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 34. For solid guidepole, the gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal repurement, and invite case shall not exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title (Refinit)

- 35. For slotted guidepole, all slotted sampling or gauging wells, and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 36. For slotted guidepole, gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall not exceed 1/8 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 37. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623; 40 CFR 60.113b(a)(1) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 38. The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of rule 4623. [District Rule 4623; 40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 39. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. Other than the gap criteria specified by this permit, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found shall constitute a violation of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
- 40. If any failure (i.e. visible organic liquid on the internal floating roof, tank walls or anywhere, holes or tears in the seal fabric) is detected during 12 month visual inspection, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If the detected failure cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the APCO in the inspection report. Such a request must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 41. The permittee shall notify the District in writing at least 30 days prior to conducting the visual inspection of the storage vessel, so the District can arrange an observer. [40 CFR 60.113b(a)(5) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 42. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623; 40 CFR 60.115b(a)(2), 60.115b(a)(3), and 63.11094(a)] Federally Enforceable Through Title V Permit
- 43. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.1 [6b(b)] Pederally Enforceable Through Title V Permit

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- 44. The permittee shall maintain records of the volatile organic liquid stored, the period of storage, and TVP of that volatile organic liquid during the respective storage period. TVP shall be determined using the data on the Reid vapor pressure (highest receipt or highest tank sample results) and actual storage temperature. [District Rule 2201 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
- 45. {2623} Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
- 46. The permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Section 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 47. The permittee shall maintain records of daily and monthly organic liquid throughput in gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 48. The permittee shall maintain all records required by this permit for a period of at least five years and shall make them readily available for District inspection upon request. [District Rules 2201 and 4623, and 40 CFR 60.116b(a)] Federally Enforceable Through Title V Permit
- 49. Prior to operating under this Authority to Construct, the permittee shall mitigate the following quantities of VOC: 1st quarter: 451 lb, 2nd quarter: 451 lb, 3rd quarter: 451 lb, and 4th quarter: 451 lb. Offsets shall be provided at the applicable offset ratio specified in Section 4.8.1 of Rule 2201 (as amended 4/21/11) [District Rule 2201] Federally Enforceable Through Title V Permit
- 50. VOC ERC S-3809-1 and N-1000-1 (or a certificate split from any of these certificates) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Federally Enforceable Through Title V Permit

Appendix II Top-Down BACT Analysis and BACT Guidelines

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San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.3*

Last Update 10/1/2002

Petroleum and Petrochemical Production - Floating Roof Organic Liquid Storage or Processing Tank, = or > 471 bbl Tank capacity, = or > 0.5 psla TVP

Pollutant	Achieved in Practice or	Technologically	Alternate Basic
	contained in the SiP	Feasible	Equipment
voc	95% control (Primary metal shoa seal with secondary wiper seal, or equal)	95% Control (Dual wiper saal with drip curtain or primary metal shoe seal with sacondary wiper saal, or equal.)	· · · · · · · ·

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a s state implementation plan must be cost effective as well as feesible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State implementation Plan.

*This is a Summary Page for this Class of Source

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.1.10*

Last Updata 2/23/2005

Loading Rack/Switch Loading

Poilutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment				
co	naturai gas fired pliot and air assist	2	-				
NOx	naturai gas or LPG fired pliot and air assist						
PM10	air assisted flare with amokeless combustion						
SOx	natural gas firad flare						
VOC	bottom loading with dry break couplers end vapor collection vented to a tharmai incinerator or flare with destruction efficiency => 99%						

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a s state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

*This is a Summary Page for this Class of Source

Top-Down BACT Analysis for VOC emissions

<u>N-758-4-5 and '-16-0</u>: Step 1: Identify All Possible Control Technologies

The following VOC emission control technologies are listed in BACT guideline 7.3.3:

<u>Achieved in Practice or contained in SIP:</u> 95% control (Primary metal shoe seal with secondary wiper seal, or equal)

Technologically Feasible:

95% control (Dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal)

Step 2: Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

The technologically feasible and achieved-in-practice have the same control effectiveness.

- 1. 95% control (Dual wiper seal with drip curtain **or** primary metal shoe seal with secondary wiper seal, or equal)
- 2. 95% control (Primary metal shoe seal with secondary wiper seal, or equal)

Step 4: Cost Effectiveness Analysis

The tanks under permits are equipped with primary metal shoe with a secondary rim mounted wiper seal. These seals are equivalent to the control requirements listed in the technologically feasible option. Therefore, cost analysis is not required.

Step 5: Select BACT

BACT requirements for VOC emissions are satisfied by the use of primary metal shoe with the secondary rim mounted wiper seal. Therefore, applicant's proposal meets District BACT requirements.

<u>N-758-13-9</u>: Step 1: Identify All Possible Control Technologies

The following VOC emission control technologies are listed in BACT guideline 7.1.10:

Achieved in Practice or contained in SIP:

Bottom loading with dry break couplers and vapor collection vented to a thermal incinerator or flare with destruction efficiency of 99% or greater

Technologically Feasible: None

Step 2: Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. Bottom loading with dry break couplers and vapor collection vented to a thermal incinerator or flare with destruction efficiency of 99% or greater, or equivalent system

Step 4: Cost Effectiveness Analysis

There is no technologically feasible option in Step 3 (above) for which a cost effectiveness analysis is required.

Step 5: Select BACT

BACT to reduce VOC emission would be to load the tanker trucks from the bottom with the use of dry break couplers, and vent the vapors displaced from the tanker to a vapor collection system served by a thermal incinerator or flare with destruction efficiency of 99% or greater, or utilize equivalent system.

The applicant is utilizing bottom loading technique with dry break couplers and venting the vapors displaced from the tanker trucks to a vapor collection system served by a carbon adsorber system capable of achieving 99% or greater control efficiency. Therefore, this proposal meets the BACT requirements.

Appendix III TANKS 4.0.9d Emissions Reports

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N-758-4-5 (Post-Project) Tanks 4.0.9d Emissions Reports

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

Identification User Identification: City: State: Company: Type of Tank: Description:	Stockton Tank 19 - max daily throughput Stockton California Shell Oil Products US Internal Floating Roof Tank Storing gasolina with maximum daily throughput (1 turnover/day)
Tank Dimensions Diameter (ft): Volume (galions): Tumovers: Self Supp. Roof? (y/n): No. of Columns: Eft. Col. Diam. (ft):	48.00 504,000.00 365.00 N 1.00 1.00
Paint Characteristics Internal Shell Condition: Shell Color/Shade: Shell Condition Roof Color/Shade: Roof Condition:	Light Rust White/White Good White/White Good
Rim-Seal System Primary Seal: Secondary Seal	Mechanical Shoe Rim-mounted
Deck Characteristics Deck Fitting Category: Deck Type:	Typical Welded
Deck Fitting/Status	
Access Hatch (24-In, Diam.)/Unbo Automatic Gauge Float Weil/Unbo Column Well (24-In, Diam.)/Built-L Ladder Well (36-In, Diam.)/Stiding Roof Leg or Hanger Well/Adjustat Sample Pipe or Well (24-in, Diam.)/W Vacuum Breaker (10-in, Diam.)/W	nted Cover, Ungasketed Jp Col-Sliding Cover, Ungesk. Cover, Ungasketed Je)/Slit Fabric Seal 10% Open

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psla)

Quantity

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

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Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stockton, California

			Daily Liquid Surf.		Liquid Busk Temp	Vacor Pressure (osia)			Vepor Mol.	L Masa	sa Masa	Hol.	Basis for Vapor Pressure
lature/Component	Month	Avg.	Min,	Max,	(deg F)	Avg.	Min.	Max.	Weight	Fract,	Fract	Weight	Calcutations
guilon Gasoline RVP 14,0	Jan	55.08	51,49	58.67	81.57	6.8839	NVA	N/A	81_0000			82.50	Option 4; RVP=14, ASTM Slope=3
1.2.4-Trimethylbenzene			-	•		0.0167	NA	N/A	120,1900	8.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.55
2.2.4-TrimeTryloantana						0.5131	N/A	N/A	114.2300	0.0470	0.0048	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0172	N/A	N/A	78.1100	0.0120	8.0024	78,11	Option 2: A=6.905, B=1211.033, C=220.79
Actohexane						1.0586	N/A	N/A	84,1600	0,0024	0.0005	84,12	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.0913	N/A	Ń/A	105.1700	0.0120	0.0002	106.17	Option 2: A=8.975; B=1424.255; C=213.21
lexane (-n)						1.6818	N/A	N/A	86.1700	0.0130	0.0043	86-17	Option 2: A=6.878, B=1171.17, C=224.41
socropyl benzene						0.0424	- N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Arthyl alcohol						1.2329	N/A	N/A	32.0400	0.0014	0.0003	32.04	Option 2: A=7.697, B=1474.08, C=229.13
lephthalene						0.0011	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Syrene						0.0603	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
oluene						0.2927	N/A	N/A	92.1300	0.0600	0.0033	92.13	Opton 2: A=6.954, B=1344.8, C=219.48
Inidentified Components						8.5331	N/A	N/A	60.6580	0.7529	0.9830	77,89	
Kylenes (Mixed)						0.0759	N/A	N/A	106.1700	0.0700	0.0010	106.17	Option 2: A=7.009, B=1482.266, C=215.11
ulion Gasofine RVP 12.5	Feb	57.95	53,17	62,75	81.57	8.3968	N/A	N/A	63.0000			82.50	Option 4; RVP=12.5, ASTM Slope=3
2,4-Trimethylbenzene						0.0185	N/A	N/A	120.1600	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,4-Trimethylpentane						0.5615	N/Å	N/A	114,2300	0.0470	0.0054	114.23	Option 2: A=6.8118, 3=1257.84, C=220.74
entene				•		1.1033	N/A	: NVA	78.1100	0.0120	0.0027	78.11	Option 2: A=8.005, B=1211.033, C=220.78
yolohexene						1.1459	N/A	N/A	84,1600	0.0024	0.0006	84.16	Option 2: A=6.841, B+1201.53, C=222.65
Shyberzene						0.1010	N/A	N/A	106.1700	0.0120	0.0002	106.17	Option 2: A=6.975, 9=1424,255, C=213.21
terane (-n)						1,8140	N/A	N/A	85.1700	0.0130	8400.0	66, 17	Option 2: A=6.876, B=1171, 17, C=224.41
sopropyl benzene						0.0473	N/A	N/A	120.2000	8.0016	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Acthyl alcohol						1,3518	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7,897, B=1474.08, C=229.13
laphthalene						0.0013	N/A	N/A	128.1600	0.0030	0.0000	128, 16	Option 2: A=6.8181, B=1585.86, C=164.32
tyrene						0.0668	N'A	N/A	104,1500	8000.0	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
oluene						6.3097	N'A	NVA.	92,1300	0.0600	0.0038	92_13	Option 2: A=6.954, B=1344.9, C=218.49
Inidentified Components						7,9104	N/A	N/A	62.6250	0.7529	0.9807	77,89	
Kylenes (Mixed)						0.0641	N/A	N/A	106.1700	0.8700	0.0012	106,17	Option 2: A=7.009, B=1462.268, C=215.11
ution Gasoline RVP 12.5	Mar	60.22	54.38	66.07	61.57	6.6772	N/A	N/A	63.0000			\$2.50	Option 4: RVP=12.5, ASTM 6lope=3
,2,4-TrimeBylbenzene						0.0206	N/A	N/A	120.1900	0.0240	0.0001	120.15	Option 2: A=7.04383, B=1573.267, C=208.56
2.4 Trimethylpentane						0.5994	N/A	N/A	114.2300	e.0470	0.0055	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
00,2800						1,1749	N/A	N/A	78,1100	0.0120	0.0028	78,11	Option 2: A=6.905, B=1211.033, C=220.79
yclohexane						1,218\$	N¥A	N/A	84,1600	0.0024	0.0008	84.19	Option 2: A=6.841, B=1201.53, C=222.65
shylbenzene						8,1094	N/A	N/A	106.1700	0.0120	0.0000	106.17	Option 2: A=0.975, B= 1424.255, C=213.21
enerce (-n)						1.9242	N/A	N/A	88.1700	0.0130	0.0049	66.17	Option 2: A=6.876, B=1171.17, C=224.41
lapropyl bantene						0.0515	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
fethyl zlochol						1.4520	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7,897, B=1474.08, C=229.13
laphthalene						0.0015	NVA	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=164.32
Хутепе						0.0724	N/A	N/A	104,1500	0.0008	0.0000	104,15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.3324 8.2582	N/A N/A	N/A N/A	92,1300 62,6168	0.0600 0.7529	0.0039 0.9203	92.13 77.89	Option 2: A=6.954, B=1344.8, C=218.48

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Xylenes (Wixed)						0.0911	N/A	N/A	106,1700	0.0700	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equiton Gasoline RVP 12.5	Apr	63.26	\$5.98	70.54	61.57	7.0675	N/A	N/A	63.0000			82.50	Option 4; RVP=12.5, ASTM Slope=3
1,2,4-Trimethylbenzene						9.0233	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0.6539	N/A	N/A	114.2300	0.0470	0.0057	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzone						1.2775	N/A	N/A	78.1100	0.0120	0.0029	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3224	N/A	N/A	84.1600	D.0024	0.0006	84,18	Option 2: A=6.041, B+1201.53, C=222.65
Ethylberzene						0.1215	N/A	N/A	106.1700	9.0128	0.0003	105.17	Option 2: A=6.975, B=1424,255, C=213.21
Hexane (-n)						2.0815	N/A	N/A	86.1700	9.0130	0.0050	66.17	Option 2: A=8.878, B=1171,17, C=224.41
Isopropyl benzene						0.0577	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl etochol						1.5969	N/A	N/A	32.0400	9.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0017	N/A	N/A	128,1600	0.0000	0.0000	128,16	Option 2: A=6.6101, B=1585.85, C=184.32
Styrene						0.0804	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						9.3651	N/A	N/A	92,1300	9,0600	0.0041	82,13	Option 2: A=6.954, B=1344.B, C=219.48
Unidenched Components						8.7369	N/A	N/A	62,6045	0.7529	0.9797	77.89	
Xylenes (Mixed)						0.1013	N/A	N'A	106.1700	0.0700	0.0013	106.17	Option 2; A=7.009, B=1452.266, C=215.11
Equion Gasoino RVP 5.99	May	67.10	58.63	75.36	61.57	3.3850	N/A	N'A	68,0000	0.00	0.0010	62.50	Option 4; RVP=5.99, ASTM Slope=3
1,2,4-TrimeTrybenzene		07.10	30.00	.0.00	0127	0.0270	N/A	N'A	120,1900	0.0240	0.0002	120.19	Option 2; A=7.04383, B=1573.267, C=206.56
2,2,4-Trimethylpectane						0.7284	Ň/A	N'A	114,2300	0.0470	0.0123	114.23	Option 2; A=6.8118, B=1257.84, C=220.74
							N/A	N/A	78,1100	0.0120	0.0123	78.11	Option 2: A=6.905, B= 1211.033, C=220.79
Berzene						1.4173						84.16	Option 2: As6.841, B-1201.53, C=222.65
Cyclohexane						1.4635	N/A	N/A	84.1600	0.0024	0,0813		
Eunyibenzene						0.1384	N'A	N/A	106.1700	0.0120	0.0006	105.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.2945	N/A	N/A	B6.1700	0.0130	0.0107	65,17	Option 2: A=8.878, B=1171.17, C=224.41
Isopropyi benzene						0.0664	N/A	N/A	120.2000	D.0015	0.0000	120.20	Option 2: A=8.963, B=1460,763, C=207.78
Methyl alcohol						1.7968	N/A	N/A	32.0400	0.0014	0.0009	52.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalane						0.0021	N/A	N/A	128.1600	0.0030	0.0000.0	125,16	Option 2: A=8.8101, B=1585.86, C=184.32
Styrena						0.0917	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Totuene						0.4103	N/A	N/A	62,1300	9.0600	0.0088	62.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4.1089	N/A	N/A	67,2321	0.7529	0.9562	77.89	
Xylenes (Mixed)						0.1155	N/A	N/A	106,1700	9.8700	0.0029	106.17	Option 2: A=7.009, B=1452.255, C=215.11
Equilon Gasoline RVP 5.99	Jun	70.33	81.45	79.22	61.57	3.0161	N/A	N/A	68.0000			62.50	Option 4: RVP=5.99, ASTM Slope=3
1.2.4-Trimethylbenzone						0.0309	N/A	N/A	120.1900	9.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylpentene						0.7967	N/A	N/A	114,2300	9.0470	0.0126	114.23	Option 2: A=6.8116, B=1257.84, C=220.74
Benzene						1,5449	N'A	N/A	78,1100	0.0120	9.0052	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexana						1.5922	NA	N/A	84,1600	0.0024	0.0013	84,16	Option 2: A=6.841, B=1201.53, C=222.65
Ethybenzene						0.1542	N/A	N/A	106,1700	0.8120	0.0006	106.17	Option 2; A=6.975, B=1424,255, C=213.21
Hexane (-n)						2,4880	N/A	N/A	86,1700	0.0130	0.0109	86.17	Oction 2: A=6.876, B=1171.17, C=224.41
Isopropyi borzene						0.0745	N/A	N/A	120,2000	0.0015	0.0000	120.20	Octor 2: A=6.963, B=1460.793, C=207.70
Mathyl alcohol					•	1,9820	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.697, 8=1474.08, C=229.13
Naphthalene						0.0025	NYA	N/A	128,1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.66, C=184.32
Shrane						D.1023	N'A	NA	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, 8=1574.51, C=224.09
Toluene						0.4520	N/A	N/A	92,1300	0.0600	0.0091	82.13	Option 2: A=6.954, B=1344.8, C=219.48
UnidenClied Components						4.3817	N/A	NA	67.2114	0.7520	9.9551	77.69	
- · · · - · · · · · ·						0.1268	N/A	N/A	106,1700	0.0700	0.0000	106_17	Option 2: A=7.009, B=1462.266, C=215.11
Xylenes (Mixed)							N/A	N/A	68,0000	0.0700	0.0000	82.50	Option 4; RVP=5,99, ASTM Slope=3
Equilon Gasoline RVP 5.99	Jt4	72.25	63.02	61.48	61.57	3.7570	N/A	N/A	120.1900	9.0240	0.0003	120,19	Option 2: A=7.04383, B=1573.287, C=208.66
1,2,4-Trimethybenzene						0.0329					9.0127	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
2,2,4 Trimethylpentane						0.8396	NVA.	N/A	114,2300	D.0470		78_11	Option 2: A=6.905, B=1211.033, C=220.79
Banzeno						1.6250	N/A	N/A	78,1100	0.6120	0.0063	-	Option 2: A=6.841, B=1201.53, C=222.65
Cyclohoxane						1.6728	N/A	NA	84.1600	0.0024	0.0013	84.18	Option 2: A=6.975, B=1424.255, C=213.21
Elhyiberizene						0.1642	N/A	N/A	106.1700	0.0128	0.0006	106.17	
Hexano (-n)						2.6088	NA	N/A	86_1700	0.0130	0.0119	86.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyi banzena				•		9.0798	N/A	NA	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						2,0992	N/A	N/A	32.0400	D.0014	9.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthelene						0,0027	N/A	N/A	128,1600	0.0036	6.0000	128,16	Option 2: A=6,8181, B=1585.88, C=184.32
Styrene						0.1091	N/A	N/A	104.1500	9,0008	0.0000	104,15	Option 2; A=7.14, B=1574.51, C=224.09
Tolueno						0.4784	N/A	N/A	62.1300	0.0600	0.0093	\$2.13	Option 2: A=6.954, B=1344.6, C=219.45
Unidentified Components						4.5501	N/A	NA	67.1990	0.7529	0.9544	77.89	
Xytenes (Mixed)						0.1373	N/A	NVA	106.1700	0.0700	0.0031	108.17	Option 2: A=7.009, B=1462.266, C=215.11
Equition Gasoline RVP 5.99	Aug	71.45	62.84	60.06	61.57	3.6975	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Sibpe=3
1,2,4-TrimeDylbenzono						0.0316	N/A	N/A	120.1900	0.0240	0.0003	120.19	Option 2; A+7.04383, B=1573.267, C=208.56
2,2,4 Trimethylpentane						0.8214	N/A	N/A	114,2300	0.0470	0.0127	114.23	Option 2; A=6.8118, B= 1257.84, C=220.74
Benzane						1_5910	N/A	N/A	78.1100	0.0120	0.0063	78.11	Option 2: A=6.905, 6=1211.033, C=220.79

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TANKS 4.0 Report

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Cyclohexane						1.6386	N/A	N/A	84.1600	0.0024	0.0013	84,15	Option 2: A=6.841, B=1201.53, C=222.65
Ectyberzene						0.1599	N'A	N/A	106.1700	0.0120	0.0006	105.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.5576	N/A	N/A	86.1700	6.0130	0.0100	邦 17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropy! benzene						0.0776	N/A	NA	120.2000	0.0015	0.0000	120.20	Option 2: A=5.953, B=1460.793, C=207.78
Methyl alcohof						2.0494	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.697, B=1474.08, C=229.13
Naphtheliene						8.0026	N/A	N/A	128.1600	8.0030	0.0000	128.18	Option 2: A=6.8181, B=1585.86, C=164.32
Styrene						0.1052	N/A	N/A	104,1500	6,0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09
Tolusne						0.4672	N/A	N/A	92.1300	8.0600	0.0092	82.13	Option 2: A=6.954, B=1344.8, C=219.43
Unidentified Components						4.4790	N/A	N/A	67.2042	0.7529	0.9547	77.89	
Xylenes (Mirad)						0.1337	N/A	N/A	106.1700	0.0700	0.0031	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilion Gasoline RVP 5.99	Sep	69.03	61.29	76.77	61.57	3.5226	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0291	N/A	N/A	120.1930	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						8,7685	N/A	N/A	114,2300	0.0470	0.0124	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene					•	1,4923	N/A	N/A	78,1100	0.0120	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.5392	N/A	N/A	84.1600	8.0024	0.0013	84.18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzena						0.1476	N/A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Haxane (-n)						2.4093	N/A	N/A	85.1700	0.0130	0.0108	85.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0712	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methys alcohol						1.9054	NA	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0023	N/A	N/A	128.1600	6.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.88, C=184.32
Styrene						0.0979	N/A	N'A	104.1500	0.0009	0.0000.0	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Totuene						0.4347	N/A	N'A	92,1300	0.0600	0.0090	82.13	Option 2: A=6.954, B=1344.9, C=218.48
Unidentified Components						4,2696	N/A	Ň/A	67,2197	0.7529	0.9555	77,89	
Xylanes (Mixad)						0.1233	N/A	N/A	106.1700	0.0700	0.0030	108.17	Option 2: A=7.009, B=1462.255, C=215.11
Equilon GaseEna RVP 5.99	Oct	64.64	58.13	71.18	61.57	3,2234	N/A	N'A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0246	N/A	N/A	120.1900	0.0240	0.0002	120.16	Option 2: A=7_04383, B=1573.267, C=206.56
2,2,4-Trime:hylpentane						0.6800	N/A	N/A	114,2300	8.0470	0.0120	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3266	N/A	N/A	78.1100	0.0120	0.0060	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3720	N/A	NA	64,1600	8.0024	8.0012	84.18	Option 2: A=5.841, B=1201.53, C=222.65
Ethylbenzene						0.1274	N/A	NA	106.1700	6.0120	0.0006	105.17	Option 2: A=6.975, 8=1424.255, C=213.21
Herane (-n)						2,1564	N'A	N/A	88.1700	0.0130	0.0108	65.17	Option 2: A=8.876, B=1171.17, C=224.41
isopropyi benzena						0.0607	N'A	NVA.	120,2000	0.0015	0.0000	120,20	Option 2: A=6.963, B=1450.793, C=207.78
Methyl alcohol						1.6668	N'A	N/A	32.0400	8.0014	0.0009	32.04	Option 2: A=7.897, B=)474.08, C=229.13
Naphthalene						0.0016	N/A	N/A	129.1600	0.0030	0.0000	128.18	Option 2: A=6.8181, B=1585.88, C=184.32
Styrene						0.0644	N/A	1VA	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tolueno						0.3808	N/A	NVA.	92,1300	0.0600	0.0086	92,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						3.9117	N/A	N/A	67.2478	. 0.7529	0.9570	77.89	· · · · · · · · · · · · · · · · · · ·
Xylenes (Mixed)						0.1062	N/A	N/A	105.1700	6.0700	0_0028	106.17	Option 2: A=7.009, B=1482.265, C=215.11
Equilon Gasoline RVP 12.5	Nov	58.87	54,21	63.53	61.57	6.5099	N'A	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0195	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, 8=1573.267, C=208.56
2,2,4-Trimethylpentane						0.5765	N/A	N/A	114,2300	0.0470	0.0055	114,23	Opdon 2: A=6.8118, B=1257.04, C=220.74
Benzene						1.1317	N/A	N/A	76.1100	0.0120	9.0027	7L11	Option 2: A=5.905, B=1211.033, C=220.79
Gyclohexane						1.1748	NVA .	N/A	84.1600	0.0024	8.0006	64.16	Option 2: A=8.841, B=1201.53, C=222.65
Ethyloenzane						0.1043	N/A	N/A	106,1700	0.0120	0.0003	106.17	Option 2: A=6.975, B= 1424.255, C=213.21
Hexana (-n) ·						1.8578	N/A	N/A	88,1700	0.0130	0.0049	25.17	Option 2: A=6.878, B=1171.17, C=224.41
Isopropyi benzene						0.0490	N/A	NA	120,2000	0.0015	0.0006	120.20	Option 2: A=6.953, B=1480.793, C=207.78
Atelnyl alcohol						1,3915	N/A	NA	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalena						4100.0	N/A	N/A	128.1600	0.0030	0.000	129,16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.0690	N/A	N/A	104.1500	0.0009	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.3B
Toluene						0.3187	N/A	N/A	92,1300	0.0600	0.0038	82.13	Option 2: A-8.954, B=1344.8, C=219.48
Unidentified Components						8.0529	N/A	NA	62.6222	0.7529	0.9806	77,89	
Xylenas (Mixed)						0.0658	N/A	N/A	105.1700	6.0700	0.0012	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equion Gasoline RVP 14.0	Dec	54.98	51.51	58.44	61.57	8.6705	N/A	N/A	61,0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-TrimeTryberzene						0.0167	NVA	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimetryipentane						0.5145	N/A	N/A	114.2300	0.0470	0.0048	114.23	Option 2: A=6.01 18, B=1257.84, C=220.74
Benzene						1.0143	NA	N/A	78,1100	8.0120	0.0024	78.11	Option 2: A=8.905, B=1211.033, C=220.79
Cyclohexane						1,0556	NA	N/A	84,1600	0.0024	0.0005	84,10	Option 2: A=6.841, B=1201.53, C=222.65
Ethybenzene						0.0909	N/A	N/A	106.1700	0.0120	0.0002	108.17	Option 2: A=6.975, B=1424.255, C=213.21 Option 2: A=6.976, B=1121.17, C=224.41
Hexene (-n)						1.6765	N/A	N/A	86.1700	0.0130	0.0043	68_17 120,20	Option 2: A=6.876, B=1171.17, C~224.41 Option 2: A=6.963, B=1460.793, C=207.78
Isopropyi benzene						0.0423	N/A	N¥A N/A	120,2000 32,0400	0.0015 0.0014	0.0000	32.04	Option 2: A=7,897, B=1474.08, C=229.13
Methyl Blochol						12/2/9	N/A	N/A	32,0400	0.0014	0.000	الالعد	Alian 2. Met 201 De (11 440, Oe223, (3

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Naphthalene	0.0011	N/A	N/A	121.1600	0.0030	0.0000	128.16	Option 2: A=6.0181, B=1585.86, C=184.32
Styrene	0.0601	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tolucne	0.2818	N/A	N/A	82.1300	0.0600	0.0033	92.13	Option 2: A=8.954, B=1344.8, C=219.48
Unidentified Components	8.5170	N/A	N/A	60.6584	0.7529	0.9630	77,89	
Xytenes (Mixed)	0.0756	N/A	N/A	106.1700	0.0700	0.0010	105.17	Option 2: A=7.009, B=1452.266, C=215.11

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

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Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stockton, California

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Seaf Factor A (b-mack-tryn): L0000 L0000 <th< th=""><th>Month:</th><th>January</th><th>February</th><th>March</th><th>April</th><th>May</th><th>June</th><th>July</th><th>August</th><th>September</th><th>October</th><th>November</th><th>December</th></th<>	Month:	January	February	March	April	May	June	July	August	September	October	November	December
Sail February ID-match of prophyni: CACCOD CACCOD <thcaccod< th=""> CACCOD <thcacc< td=""><td></td><td></td><td></td><td></td><td>24.5143</td><td>10.6594</td><td></td><td></td><td></td><td></td><td></td><td></td><td>22.830</td></thcacc<></thcaccod<>					24.5143	10.6594							22.830
Value of Vapor Pressues Function: 0.154 0.1477 0.1520 0.0531 0.0774 0.0774 0.0773 0.0783 0.0777 0.1450 0.1451 Surface Terromizants (plu): 6.1858 6.3988 6.5772 7.077 3.388 3.5161 3.7570 3.5273 3.2224 8.5099 6.6 Tax submetting (plu-mole): 6.10000 6.3000 6.													0.600
Vigoo Presume (Daly Arenega Lunid Data													0.400
Surters Temperizario (pub): 6.8388 6.8388 6.6772 7.0673 3.2880 3.6161 3.7570 3.8273 3.5223 3.2224 6.5079 6.8 Virab Underki Wicking (Pub-mok): 61.0000 64.0000 46.0000 46.0000 46.0000 46.0000 64.0000 64.0000 64.0000 64.0000 64.0000 64.0000 64.0000 64.0000 64.0000 64.0000 63.000 63.000 <td< td=""><td></td><td>0.1564</td><td>0.1417</td><td>0.1500</td><td>0.1621</td><td>0.0653</td><td>0.0704</td><td>0.0736</td><td>0.0722</td><td>0.0683</td><td>0.0517</td><td>0.1450</td><td>0.155</td></td<>		0.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0736	0.0722	0.0683	0.0517	0.1450	0.155
Tra Bunner (N: 48.0000												e care	C 0 77
Vipor Medicadar Wedgra (brb-mole): 61,0000 62,0000													
Product Factor 1,0000 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>61.000</td></th<>													61.000
Immedia 10000 <													1.000
Effective Column Clameter (1): 10000 <	Vilhdrawad Losses (Ib):	61,4890	61.4890	61,4890	61,4890	61.4890	61,4890	61,4890	61.4890	61,4890	61.4890		61,485
Net Througheut (gel/mol) 15,000,00000000000000000000000000000000													1.000
Straft Gringbage Factor (bet/1000 cc/n): 0.0015 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 <		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						1.000
Average Grand: Liquit Density (bypa): SE000												5,330,000,000011	330,000,000
Tark Daments (1): 42.0000													5,600
Construction (p) Construction (p)<	Average Organic Liquid Density (Ib/gal);												48,000
Open of Vipper Prises D.0554 D.1117 D.1556 D.1117 D.1550 D.1157 D.0553 D.0773 D.0773 <thd.0773< th=""> D.0773 <thd.0773< th=""></thd.0773<></thd.0773<>	I Brik D-ameter (II):	48.0000	48.0000	48.0000	48,0000	48.0000	45.0000	48.0000	48.0000	48.0000	43.0000	48.0000	40.004
Vago: Mage: Laboratis: Weight (b/b-mole): 61 0000 62 0000 62 0000 62 0000 62 0000 62 0000 63 0000 53 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 60 0000 60 0000 60 0000 60 0000 60 0000 60 0000 60 0000 60 0000 60 0000 63 0000		239.6678	224.4744	237.6688	256.8899								239.24
Product Factor: 1,0000 301,8000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.155</td></t<>													0.155
To: Roof Fitting Loss Fact_(0-mole/yr): 301 3000													
Construction Contract Contrant Contract Contract													
Deck Seam Langh (f): 0.0000	Tot. Root Hitting Loss Fact (ID-mole/yr);	301.8000	301-9000	301,8000	301,9000	301,6000	301,6000	301.8000	301,8000	301,6000	301,9000	3012000	301.000
Deck Seam Loss per Unit Langth Croce Croe Croce Croce <t< td=""><td></td><td>0.0000.0</td><td></td><td></td><td>0.0000</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td></t<>		0.0000.0			0.0000								0.00
Factor (b-mote/hyr); 0.0000 0.000 0.0000 0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000.0	0.0000	0.00
Deck Seam Length Factor(thrugf): 0,0000 48,0000 48,000 58,000 10,000 10,000 </td <td></td>													
Tark Damiter (ft): 40,000													0.00
Vispon Malanzia: Weight (b/b-male): B1.0000 B3.0000 B3.000 S3.0000 B3.0000													48.00
Product Factor: 1,0000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>61.00</td></t<>													61.00
Roof Fitting-Status Roof Fitting-Status <throof fitting-status<="" th=""> Roof Fitting-Status</throof>													1.00
Roof Fitting/Status Quantity KFa(th-modelyr) KFa(th-modelyr) m Losses(th) Access Hatch (24-In. Diam.)/Unbolted Cover, Ungasketed 1 38.00 5.80 1.20 253.6522 Automatic Gauge Float Well/Linbolted Cover, Ungasketed 1 14.00 5.40 1.10 98.6425 Column Well (24-In. Diam.)/Stath-Up ColStating Cover, Ungask. 1 147.00 0.00 0.00 331.1571 Ledder Well (24-In. Diam.)/Stath-Up ColStating Cover, Ungask. 1 76.00 0.00 535.4883 Rool Leg or Hanger Well/Adjustatie 14 7.90 0.00 76.2760 Sample Pipe or Well (24-In, Diam.)/Stath-Up ColStating Cover 14 7.90 0.00 94.5507	Total Losses (%):	324.2468	307.3844	321.8379	342,8932	163,8485	193.3287	189.2813	196.7571	189,4185	177,1193	313,1007	323.56
Roof Ficing/Status Quantity KFs(th-mode/yr) KFs(th-mode/yr) m Losses(th) Access Hatch (24-In. Diam.)/Unbolied Cover, Ungasketed 1 38.00 5.90 1.20 253.6522 Automatic Gauge Float Well/Linbolted Cover, Ungasketed 1 14.00 5.40 1.10 98.6425 Column Well (24-In. Diam.)/Stath-Up ColStating Cover, Ungask. 1 147.00 0.00 0.00 331.1571 Ladder Well (24-In. Diam.)/Stath-Up ColStating Cover, Ungask. 1 76.00 0.00 535.4883 Rool Leg or Hanger Well/Adjustatie 14 7.90 0.00 76.2760 Sample Floe or Well (24-In, Diam.)/Stath-Up ColStating Cover 14 7.90 0.00 94.5507								Real Puiza Los	Eactors				
Automatic Gauge Final Wet/Unbotted Cover, Ungaskead 1 14.00 5.40 1.10 98.6425 Column Wet (24-In, Diam, Youth-Up ColStiting Cover, Ungaskead 1 47.00 0.00 331.1571 Ladder Weil (24-In, Diam, Youth-Up ColStiting Cover, Ungaskead 1 47.00 0.00 0.00 331.1571 Ladder Weil (24-In, Diam, Youth-Up ColStiting Cover, Ungaskeard 1 78.00 0.00 0.00 535.4853 Rool Leg to Hanger Weil/Adjustaties 14 7.90 0.00 0.00 776.2750 Sample Pipe or Weil (24-In, Diam, VSI) Fabric Sagi 10% Open 1 12.00 0.00 0.00 845507	Roof Fining/Status				Qu	antily	KFa(to-mote/yr)				m	(d)seeoJ	
Automatic Gauge Final Wel/Unbotted Cover, Ungaskaad 1 14.00 5.40 1.10 98.6425 Column Well (24-In, Diam, Youth Up ColSitting Cover, Ungask, Ladder Weil (24-In, Diam, Youth Up ColSitting Cover, Ungask, Rool Leg or Hanger Well/Adjustatie Sample Pipe or Weil (24-In, Diam, Youth Date) 1 47,00 0.00 0.00 331.1571 Sample Pipe or Weil (24-In, Diam, Youth Date) 1 78,007 0.00 0.00 535.4853 Sample Pipe or Weil (24-In, Diam, Yoil Fabric Sagi 10% Open 14 7,90 0.00 0.00 742.7507	Arross Hatch 24-In Diam Mitched Care						38.00		5.90			253.6522	
Column Well (24-In, Diam, VBuBh-Up ColSilting Cover, Ungask, 1 47,00 0.00 331.1571 Ledder Well (36-In, Dam, VBuBh-Up ColSilting Cover, Ungask, 1 78,00 0.00 535.4880 Rool Leg or Hanger Well/Adjustable 1 78,00 0.00 535.4880 Sample Pibe or Well (24-In, Diam, VBL Fabric Segi 10% Open 14 7,90 0.00 645507	Automatic Gauge Final Well/Linbolted Cover.	Uncaskeled				i							
adder Well (36-In. Diam.)/Sliding Cover, Ungsäkated 1 76,00 0.00 535,4880 Rool Leg or Hanger Well/Adjustable 14 7,600 0.00 0.00 762,760 Sample Piloe Well (24-In, Diam.)/Slid Fabric Segi 10% Open 1 1 12,00 0.00 0.00 84,5507	Column Well (24-In, Diam.)/Buth-Up ColState	ng Cover, Ungask,				i						331,1571	•
Sample Pipe or Well (24-in, Diam, VSI2 Fabric Seq1 10% Open 1 1 12:00 0.00 84.5507	adder Well (36-in: D/am.)/Sliding Cover, Ung	askned				1							
						14							
/accam Breaker (10-in, Diam, Wileinheid Mech, Actuation, Gask, 1 6.20 1.20 0.94 43.6846	Sample Pipe or Well (24-In, Diam.)/SI3 Fabric	Seal 10% Open				1			0.00 1.20		0.00 0.94	84.5507 43.6846	

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

Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stockton, California

			Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Filting Loss	Deck Seam Loss	Total Emissions
Equilon Gasoline RVP 5.89	67.15	368.93	703.67	0.00	1,139.75
1,2,4-Trimethylbenzene	0.02	8.65	0.17	0.00	9.04
2,2,4-Trimethylpentane	0.84	17.34	8.77	0.00	26.95
Benzene	0.41	4.43	4.35	0.00	9.19
Cyclohexane	0.09	0.99	0.90	0.00	1.87
Ethylbenzene	0.04	4.43	0.43	0.00	4.90
Hexane (-n)	0.72	4.80	7.60	0.00	13.12
Isopropyl benzene	0.00	0.55	0.03	0.00	0.58
Methyl alcohol	0.06	0.52	0.65	0.00	1.23
Naphthalene	0.00	1.11	0.00	0.00	1.11
Styrene	0.00	0.30	0.02	0.00	0.32
Toluene	0.60	22.14	6.34	0.00	29.08
Unidentified Components	64.16	277.77	672.32	0.00	1,014.25
Xylenes (Mixed)	0.20	25.83	2.10	0.00	28.13
Equilon Gasoline RVP 12.5	90.53	245.96	948.73	0.00	1,285.22
1,2,4-Trimethylbenzene	0.01	5.90	0.09	0.00	6.00
2,2,4-Trimethylpentane	0.50	11,56	5.24	0.00	17.30
Benzene	0.25	2.95	2.62	0.00	5.82
Cyclohexane	0.05	0.59	0.54	0.00	1.19
Ethylbenzene	0.02	2.95	0.24	0.00	3.22
Hexane (-n)	0.44	3.20		0.00	6.29
Isopropyi benzene	0.00	0.37	0.01	0.00	
Methyl alcohol	0.04	0.34	0.38	0.00	
Naphthalene	0.00	0.74	0.00	0.00	
Styrene	0.00	0.20		0.00	
Toluene	0.35	14.76		0.00	
Unidentified Components	88.75	165.18	930.03	0.00	1,203.96

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Xylenes (Mixed)	0.11	17.22	1.19	0.00	- 18.52
Equilon Gasoline RVP 14.0	45.72	122.98	479.11	0.00	647.81
1,2,4-Trimethylbenzene	0.00	2.95	0.04	0.00	2.99
2,2,4-Trimethylpentane	0.22	5.78	2.28	0.00	8.28
Benzene	0.11	1.49	1.15	0.00	2.73
Cyclohexane	0.02	0.30	0.24	0.00	0.56
Ethylbenzene	0.01	1.48	0.10	0.00	1.59
Hexane (-n)	0.20		2.06	0.00	3.85
tsopropyl benzene	0.00	·0.18	0.01	0.00	0.19
Melinyi alcohol	0.02	.0.17	0.16	0.00	0.35
Naphthalene	0.00		(0.00	0.00	0.37
Styrene	0.00	0.10	0.00	0.00	0.10
Toluene	0.15	7.38	1.60	0.00	9.13
Unidentified Components	44.94	92.59	470.97	0.00	608.51
Xylenes (Mixed)	0.05	9.61	(0.50	0.00	9.16

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

Identification	
User Identification:	Stockton Tank 19 post-project ann throughput
City:	Stockton
State:	California
Company:	Shell Oil Products US
Type of Tank:	Internal Floating Roof Tank
Description:	Storing gasoline with maximum annual post-project throughput (7,560,000 ga/month)
Tank Dimensions	
Diameter (ft):	48.00
Volume (gallons):	504,000,00
Tumovers:	180.00
Self Supp. Roof? (y/n):	N
No. of Columns:	1.00
Eff. Col. Diam. (ft):	1.00
Paint Characteristics	
Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	WhiteWhite
Roof Condition:	Good
Rim-Seal System	
Primary Seal:	Mechanical Shoe
Secondary Seal	Bim-mounted
occontrally occar	
Deck Characteristics	
Deck Fitting Category:	Typical
	Welderi
Deck Type:	maleu

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

Quantity

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

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Stockton Tank 19 post-project ann throughput - Internal Floating Roof Tank Stockton, California

icture/Component		Month	Month	ponent Month	Month	re/Component Month		ily Liquid Gu peratura (de		Liquid Bulk Temp	Vaco	Pressure (peta)	Vapor Mol.	Liquid Mass	Vapor Mass	MoL	Basis for Vapor Pressure
	Month	Avg.	Min	Marc.	(deg F)	Avg.	Min.	Max.	Weight	Fract.	Fract	Weight	Calcutations					
inuiton Gasoline RVP 14.0		55.08	51.49	58.67	61.57	8.6636	N/A	N/A	91_0000			82.50	Option 4: RVP=14, ASTM Slope=3					
1,2,4-TrimeDythenzere						0.0167	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56					
2.2,4 TrimeInvicentane						0.5161	N/A	N/A	114.2300	0.0470	0.0048	114.23	Option 2; A=6.8118, 8=1257.84, C=223.74					
Benzena						1.0172	N/A	N/A	78.1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=223.79					
Cyclohexane						1.0586	N/A	N/A	84,1600	0.0024	0.0005	84,16	Option 2: A=6.841, B=1201.53, C=222.65					
Ethylbenzene						6.0913	N'A	N/A	106.1700	0.0120	0.0002	106.17	Option 2: A=5.975, B=1424.255, C=213.21					
Herene (-n)						1.6810	N/A	N/A	85,1700	0.0130	0.0043	85.17	Option 2: A=6.876, B=1171.17, C=224.41					
Isopropyl benzene						0.0424	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B+1460.793, C=207.78					
Wainyi alcohof						1.2329	N/A	N/A	32.0400	0.0014	0.0003	32.04	Option 2: A=7.897, 8=1474.08, C=229.13					
Nachthelene						0.0011	N'A	N/A	128.1600	0.0030	0.0000	128.18	Option 2: A=6.8161, B= 1585.88, C= 184.32					
Shrene						0.0603	N'A	N/A	104,1500	0.0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09					
Toluene						0.2827	N/A	N/A	92,1300	0.0600	0.0033	\$2.13	Oction 2: A=6.954, B+1344.8, C=218.48					
Unidentified Components						L5331	N'A	N/A	60.6580	8,7529	0.9830	77.89	•					
Kylenas (Mixad)						0.0759	N"A	N/A	106.1700	0.0700	0.0010	106.17	Ondon 2: A=7.009, B=1452.256, C=215.11					
aution Gasoline RVP 12.5	Feb	57.96	53.17	62.75	61.57	6.3968	N'A	N/A	63.0000			82.50	Option 4: RVP-12.5, ASTM Slope-3					
1,2,4-Trimethylbenzene	140		W		01.20	0.0188	N/A	N/A	120.1900	0.0240	9.0001	120.19	Option 2: A=7.04383, B=1573.257, C=208.56					
2,2,4-Trimethylentane						0.5815	N/A	N/A	114,2300	0.0470	0.0054	114.23	Option 2: A=6.8118, B=1257.84, C=220.74					
Benzene						1,1033	N/A	N/A	78.1100	0.0120	0.0027	79.11	Option 2: A=6.905, B=1211.033, C=220.79					
Cyclohexane						1.1459	N/A	N/A	B4.1600	0.0024	0.0006	84.16	Option 2: A=8.841, B=1201.53, C=222.65					
Elivibenzane						9.1910	NYA	N/A	106,1700	0.0120	20000	106.17	Option 2: A=8.975, B=1424.255, C=213.21					
Hexane (-n)						1,9140	N/A	N/A	85.1700	0.0120	0.0048	84.17	Ortion 2: A=6.876, B=1171.17, C=224.41					
sopropyl berzene						0.0473	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78					
Nethyl alcohol						1.3519	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13					
Veshyi zaskasi Veshifiziene						0.0013	N/A	N/A	128,1600	0.0030	0.0000.0	126.19	Option 2: A=6.8191, B=1565.86, C=184.32					
						9.0668		N/A	104,1600	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.61, C=224.09					
Styrene Toluena						9.0658	N'A 14'A	N/A	92,1300	0.0600	0.0038	92.13	Option 2: A=6.954, B=1344.B, C=219.48					
Indentified Components						0.3097	N/A	N/A	92,1300 62,6258	0.7529	0.9807	\$2,13 77,89	VINCE - 100,000, 0= 10112, 0-218,40					
Undent Fed Components Xylanes (Mixed)						7.9164	N/A	N/A	106,1700	0./529	0.9807	106.17	Option 2; A=7.009, B=1462.266, C=215.11					
igudon Gasolina RVP 12.5	Mar	60.22	54.36	66.07	61.57	8.6772	N/A	N/A	63.0000	0.0100	0.0012	82.50	Ontion 4: RVP=12.5. ASTM Slope=3					
1.2.4-Tranenybergene	M. S.	00.22	34-30	00.07	01,37	0.0206	N/A	NVA	120,1900	0.0240	9,0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.5					
2,2,4-Trimethylpentane						0.5094	N/A	N/A	114,2300	0.0470	0.0055	114.23	Option 2: A=6.8113, B=1257.84, C=220.74					
2,2,4-1153901ypestune Benzene						1,1749	N/A	N/A	78,1100	9.0120	0.0028	78.11	Option 2: A=6.905, B=1211.033, C=220.79					
Dydohexane						1,1/49	N/A	N/A	64,1500	0.0024	0.0025	84.16	Option 2: A=6.841, B=1201.53, C=222.65					
Ethylbenzene						9,1094	N'A	N/A	105.1700	0.0120	0.0003	105.17	Option 2: A=6.975, B=1424.255, C=213.21					
Hezene (-n)						1.8242	N/A	N/A	85,1700	0.0130	0.0048	86.17	Option 2: A=6.875, B=1171,17, C=224.41					
• •						0.0515	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460,783, C=207.78					
sopropyl benzene							N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7,897, B=1474,08, C=229,13					
Methyl alcohol						1.4520 0.0015	N/A	N/A	128.1600	0.003a	0.0000	128,19	Option 2; A=6.8191, B=1565.86, C=184.32					
Naphthelene						0.0015	N/A	N/A	128.1600	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09					
Slyrene							N/A	N/A	92,1300	0.0600	0.0039	92.13	Option 2: A=8.954, B=1344.B, C=219.48					
Toluene Unidentified Components						0.3324 8.2582	N/A	N/A	92,1300 62,6168	0.7529	0.9803	17.89	Ofmins: weiter, Derfer D. Cas1840					

Option 2: A-6.905, 8-1211, 0031, C=220.79	11.67	6300.0	0210.0	0011182	¥/N	AW	01651						2,2,4-Trinetivitensi Banzene
Option 2: A=6.0118, B=1257.84, C=220.74	62 M I	12100	0/100	1145300	V/N	V/N	1290						enstnedfyrtterritT-A,S,F enstnerfyrtterritT-A,S,F
Option 2: A-7.04383, 8-1573.267, C-208.56	150119	6000-0	0+2016	120.1900	Y/N	V/N	61000					6	
Everyoli2 NIT2A ,06.3-9VA : > notigo	85.50			0000 99	V/N	VAN	5/69°C	72.to	90.06	10.53	5712	6ny	Edition Gatopos HAL 2.99
Option 2: A=7,009, B=1452,256, C=215,11	21.901	1500.0	002010	00/1.801	Y/N	¥/N	5261.0						Xylenes (Mized)
	68 (L	** \$6'0	6227.6	0861'29	Y/N	W/N	10551						Totypene Unidentified Components
Option 2: A-6.954, B-1344.8, C-218.48	E1.58	CBOULO	0090'0	0001-28	¥/N	¥/N	¥817 0						BURLEY
0122-0,12,451-8,41,7-4 2 mappi	21.101	000070	6000.0	104.1500	¥/N	¥/N	1801.0						BURELEUGEN
CEAST-0.68.2621-9.1818.0-A-5 notigo	91.821	0000010	00000	128,1600	V/N	YAN	2200'0						
CI.055-CI.00.1474.6 (728.7-4.5 0000)	+0°2C	600010	\$100.0	35.0400	Y/N	¥/N	26607						ionoola hethelik
Option 2: A=6.963, B=1460.783, C=207.78	150.20	00000	2100.0	150,2000	Y/N	AV/	9620.0						ischoold peuseue
19.955-0.71,1711-8,378.3-4 -5 0000	21.99	0110.0	0610-0	0021.88	VA	¥/N	2,0039						(-1) Hexenseue
Open 2: A=0.975, 8=1424.255, C=213.21	11.801	900010	02100	0021'901	¥/N	A'H	0 1845						ersteindigt)
Copton 2: A-6.141, B-1201 53, C-222.65	ar.#8	0.0013	0.0024	0091.98	¥/N	AW	6213.1						euszueg
Option 2: A-6.905, B-1211,033, C-220,79	11/182	£900'0	0210.0	0011-82	¥/N	¥/N	05291						
47.055-0, 48.7251-8, 8118.8-4 S notio	C2-011	12100	02100	114,2300	V/N	¥/N	960810						Section 1-4.2.5
02400 2. A-7,04383, B-1573, 24, C-206,56	61.051	6,0003	0.0240	120,1900	A'N	V/N	6200.0			7-144			0.050000000000000000000000000000000000
E-acid2 Mf2A , 68.5-9VA 14 notio0	62.50			0000.88	A\N	AVA	0/5/°C	15.18	84.18	S8.69	σu	PC .	Equipor Gession RVP 5.93
11.215-0,885.58+1-8,901.7-4.5 nobp0	71.301	0.0030	002010	0021.001	V/N	¥/N	8.1266						Xitenes (Mited)
	687 <i>11</i>	1556.0	625410	1112,73	¥/N	V/N	1185.4						etnencimo. beilänebinU
Opeon 2: A=6.054, 8=1344.0, C=219.48	C176	1600'0	0090'6	9051-28	¥/N	¥/N	0.4520						anantoT
00666 2. A-7.14, B-1574,51. C-224,00	S1 101	000010	8000.0	0021.501	V/N	¥/N	011053						Syrene
Cpdon 2: A=6.0191, 8=1565.66, C=164.32	917621	000070	00000	123.1600	AW.	¥/N	\$200.0						enstantigeli
C1.055C-2.30.111+1-8.783.7-A.15 C-229.13	32.04	6000.0	+100.0	32.0400	V/N	¥/N	1,9620						Indicate Mittail
87.705-0 ,087.03+1-8 ,096.2-4 ;5 nobrO	05.051	0000-6	5100.0	150 5000	AW	¥/N	9+2010						
14.455-0 .71.1711-8 .878.8-4 .5 roino	¥1.89	6010.0	00100	0071.88	AVÁ	¥/N	2,4880						
Option 2: A=6.975, B= 1424.255, C=213.21	21.901	900010	02:08	0021-901	YAN	¥/N	2121.0						erestied the second sec
Option 2: A=8.841, 8-1201.53, C-222.65	91.48	0.0013	•200-0	0091.46	¥/N	¥/N	2265"1						Cycloherane
Option 2: A=6.905, B=1211.033, C=220.79	11782	Z900'0	0210.0	0011182	VAN	¥/N	67751						Benzene
•T.055+0, •A.7251+8, 8118,8+4.5 hold(0)	EZ PLI	9210.0	0210010	0052.011	VAN	¥/N	1962'0						ອາຣາາຍຕ່ຳເວລາກ1-4.S.S
82.805-0 ,T355F731-8 ,E85H0.Y-A-5 noiseO	61 OZ1	2000.0	810540	120.1900	AW.	A'N	SOE0.6						enstrediyiteriniT-9,5,1
E-ecols MT2A, 68.2-9VR 1 notino	62.50			0000.83	¥/N	¥/N	1919.0	1519	22.67	57.18	CE.07	art	Equipon Casoline RVP 5.99
11.215.0,65.4+145.266, C+215.11	21.901	6500.0	002010	00217901	VAN	¥/N	55:10						Xylenes (Kized)
	68°11	2996-0	625210	122219	Y/N	VA	6801"						amenoqmoD be&mebrill
Option 2: A=6.954, B=1344.B, C=219.48	C1 26	8900.6	009010	85.1300	¥/N	V/N	CO11-0						Towere
Octon 2: A-7.14, B-1574.51, C-224.09	51'901	000070	8000.0	104.1500	A'N	¥/N	1160.0						eventis
\$5.481-0 ,89.2921-6 ,1918.8-4 :\$ notion	SI 621	000010	0600.0	0091761	Y/N	¥/N	0.0021						ecsteringsh
Critich 2: A-1474 B-1474 DB, C-229.13	10.52	6000-6	\$100.0	35 0400	¥/N	¥/N	8962.1						loricite hyritely
Option 2: A=6,963, 8= 1460,753, C=207,78	150.20	0.0000	510078	150,2000	¥/N	A'N	¥990'0						ane zned horizone
Option 2: A=6.876, B=1171.17, C=224.41	Z1 98	2010.0	02120	0021.88	A'N	VAN	2,2945						(n-) ensish
Option 2: A-6.575, B-1424.255, C-213.21	21°901	9000.0	0218-8	0071,301	¥/N	¥/N	P361.0						Ellyberrere
Option 2: A=6.541, 8=1201,53, C=222,65	âr.18	£100.0	1,200.0	0091799	¥/N	V/N	SC91 I						Cyclofrexane
Oppor 2: V=9:802' B=1211.033' C=250'79	11.182	1900.0	0210.8	001,1182	¥/N	¥/N	621111						Gentone
Option 2: A=6.8118, B=1257.64, C=220.74	62 ¥ L L	62:0.0	021018	0002.001	¥/N	¥/N	1857.0						ensinertyrbenii1.6,5,5
Option 2: A=7.04383, B=1573.267; C=206.56	81,851	5000.0	8 0540	1501800	V/N	¥/N	022010						anasodynaami 1-1,2,1
C-equila MITZA (09.249VR (4 notido	05.58			0000.83	¥/N	A/H	3-3390	2919	90°52	69795	0:'29	ATW	Equition Casoline RVP 5.99
11.215m3,665.5341=8,600,5m4.5 nobro	21'901	C100 0	002070	0071.001	¥ЛN	V/N	0,1013						Xylenes (Mired)
	687 <i>1</i> ,2	2626-0	6252'0	SH09.59	¥/N	¥/N	69CZ.6						emenognoù bellinebinù
Option 2: Am6.954, B-1344.B, C-219.48	61.58	1100.0	009010	9001.58	¥/N	A'N	1596'0						aneutoT
Option 2. A.7.14, B.1574,51, C-224,09	21.HOT	0000.0	8000.0	0051.101	¥/N	V/N	P080.0						energis
SE A81-0, 282.8821-6, r819.8-A :S nobio	81.851	00000	00000	126.1600	¥/N	¥/N	Tr00.0						ensishingsi
Option 2: A.7 897, B-1474,06, C-229,13	¥0765	0,0004	1:000	32,0400	¥/N	¥/N	69651						include hydraid
Option 2: A=6.963, B=1<60.793, C=207.79	150-50	000010	510010	150,2000	¥/N	¥/N	2250.0						enstred hydrogod
Option 2: A+6.876, B=1171.17, C=224.41	21.28	090010	061019	0071.38	¥/N	¥/N	2,0015						(U-) oceralit
Option 2: A=6.975, 8=1424.255, C=213.21	71,201	600000	0510.8	00211901	¥/N	¥/N	5:21.0						0u82u80j/uj73
Option 2: A=6.341, 8+1201.53, C+222.65	91'19	9000.0	P200.8	0031.48	A\M	¥/N	1 3554						Cydohexane
Option 2: A=6.905, B=1211.023, C=220.79	11.82	8200.0	0210.0	0011-82	¥/N	¥/N	5/12.1						ອບສະນອອ
0ption 2: A=6.0116, 8=1257.54, C=220.74	62'91 L	<u>i</u> 500'0	02100	11-3300	¥/N	V/N	6559-0						ensinedy/damin1.4,S.S
Option 2: A=7.04383, 8=1573.267, C=206.56	150 18	1000.0	0-20.8	1501300	¥/N	V/N	0.0233						ອກອະກອດຊີ້ແຫຼຍກາກ7-4,5,1
C=equis MT2A ,2.51=9VR ;h noligo	05.58			0000759	¥/N	¥/N	£290°2	<i>LS</i> 18	PS-02	66.22	92.09	xtA	Equition Gasoling RVP 12.5
11.215-0, 362.5341-9, 600, T-A.5 nobp	71.301	£100.0	00/010	00211901	¥/N	¥/N	115010						(pe∞n) sauak/x

المحافظين الالتواد يوتوك والمالة

TANKS 4.0 Report

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Cyclohexane						1.6386	N/A	N'A	84,1600	0.0024	6.0013	84.16	Option 2: A=5.841, 8=1201.53, C=222.65
Ethybergera						0.1599	N/A	N/A	106,1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexano (-n)						2.5576	N/A	N/A	85.1700	0.0130	0.0109	85.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyl benzene						0.0776	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, 8=1460.793, C=207.78
MEDTyf alcohol						2.0494	N/A	N/A	32.0400	6.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthelene						0.0026	N/A	N/A	128.1600	0.0030	6.0000	128.16	Option 2: A=6.6181, B=1585.86, C=184.32
Styrene						0.1062	N/A	N/A	104.1500	6.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.4872	N/A	N'A	82,1300	6.0600	0.0092	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4,4790	Ń'A	N/A	67.2042	0.7529	0.8547	77.89	
Xylenes (Mixed)						0.1337	N/A	N/A	106.1700	0.0700	0.0031	106.17	Option 2: A=7,009, B=1462,266, C=215.11
Equilion Gasolino RVP 5.99	Sep	69.03	61.28	76.77	61.57	3,5226	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1.2.4-Trimethylbenzene						0.0291	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2: A=7_04383, B=1573.267, C=208.56
2,2,4-Trimethylpeniane						0.7685	N/A	N/A	114,2300	0.0470	0.0124	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Berttene						1.4923	N/A	N/A	78.1100	0.0120	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.5392	N/A	N/A	84.1600	0.0024	0.0013	84.16	Option 2: A=6.641, 9=1201.53, C=222.65
Ethylbenzene						D.1476	N'A	N/A	106,1700	0_0120	0.0008	106.17	Option 2: A=8.975, B=1424.255, C=213.21
Hexana (-n)						2.4083	N/A	N/A	88.1700	6.0130	6.0106	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyi berizene						0.9712	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.9054	N/A	N/A	32,0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, G=229.13
Nzphthalene						0.0023	N/A	N/A	128,1600	0.0030	0.0000	128.16	Option 2: A=6.8181, 8=1585.88, C=184.32
Styrene						0.0979	N'A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Totuena						0.4347	N/A	N/A	92,1300	0.0600	0.0090	82.13	Option 2: A=5.954, B=1344.8, C=216.46
Unidentified Components						4,2698	N'A	N/A	67.2197	0.7529	6.9555	77,89	
Xylenes (Mixed)						0.1233	N'A	N/A	106,1790	0.0700	6.0000	108.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasofine RVP 5.99	Oct	64.64	56.13	71.19	61.57	3,2234	N/A	N/A	68.0000			\$2.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimetrythenzone	~~~		34210			0.0246	N'A	N/A	120,1900	0.0240	0.0002	120.19	Option 2: A=7,04383, B=1573,257, C=208.55
2,2,4-TrimeTrylpentane						0.6900	N/A	N/A	114,2300	0.0470	6.0120	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3266	NVA	N/A	76.1100	0.0120	0.0000	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexana						1,3720	N/A	N/A	84,1900	0.0024	0.0012	64.19	Option 2: A=6.841, B=1201.53, C+222.65
Ethylbenzene						0.1274	N/A	N/A	105.1700	0.0120	0.0006	106.17	Option 2: A=6.975, 8=1424.255, C=213.21
Haxane (•n)						2.1564	N/A	N'A	85.1700	0.0130	0.0106	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyi benzame						0.0607	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Meshyl alcohol						1.6668	N/A	NVA.	32.0400	6.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthelene						0.0016	NA	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrane						0.0844	NVA .	N/A	104,1500	0.0006	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tokusne						0.3809	N/A	N/A	92.1300	0.0600	0.0086	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Uniden/25ed Components						3,9117	N'A	N/A	67.2478	0.7529	0.9570	17,89	
						0.1062	N/A	N/A	106.1700	6.0700	0.0028	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Xylenes (Mixed) Equilon Gasoline RVP 12.5	Nov	58.87	54,21	63.53	61.57	6.5099	N/A	N'A	63.0000	02.00		12.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethylbenzene		36.67	39,21	03-33	01.37	0.0195	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, 8=1573.267, C=208.56
2,2,4-Trimebylperize						0.5765	N/A	N/A	114,2300	6.0470	0.0055	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
						1.1317	N/A	N/A	78.1100	6.0120	0.0027	76.11	Option 2: A=6.905, B=1211.033, C=220.79
Benzene Cyclohekane						1.5748	N/A	N/A	84,1600	6.0024	0.0006	04,16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzena						0.1043	NVA	N/A	106,1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424.255, C=213.21
						1_8578	NVA	N/A	88,1790	0.0130	0.0049	66.17	Option 2: A=0.876, B=1171.17, C=224.41
Hexano (-n)						0.0490	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Isogropyi benzene						1.3915	N/A	N/A	32.0400	0.0014	9.0004	32.04	Ontion 2: A=7,897, B=1474,08, C=229.13
Mothyl alcohol						0.0014	N/A	N/A	128,1600	0.0030	0.0000	125.16	Option 2: A=8.8181, B=1585.86, C=184.32
Naphthalene						0.0014	N/A	N/A	104 1500	0.0008	0.0000	104.15	Option 2; A=7.14, B=1574.51, C=224.09
Styrene Totuene						0.3167	N/A	N'A	92,1300	6.0600	0.0038	92.13	Option 2: A=6.954, B= 1344.8, C=219.48
Unidentified Components						0.0529	N/A	N/A	62.6222	0.7529	0.9306	77.69	
						0.0668	N/A	N/A	106.1700	0.0700	0.0012	105.17	Option 2; A=7.009; B=1462.268, C=215.11
Xylenes (Mixed) Equition Gasotine RVP 14.0	Dec	54.99	51.51	58.44	61.57	6.8705	N/A	N/A	61.0000	0.0100		82.50	Option 4: RVP=14, ASTM Slope=3
•	Duc	an .30	16.10	30.44	51.37	0.0167	N/A	NYA	120,1900	0.0240	6.0001	120.18	Option 2: A=7.04383, B=1573.267, C=208.56
1,2,4-Trimethybenzere						0.5145	N/A	N/A	114,2300	0.0240 0.0478	0.0048	114.23	Option 2: A=6.81 18, B=1257.84, C=220.74
2,2,4-Trimethylpentano						1.0143	N/A	NVA	78,1100	0.0120	6.0024	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Bertzene						1.0558	N/A	N/A	84,1900	0.0024	0.0005	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Cyclotexane						0.0909	N/A	N/A	106,1700	0.0120	0.0002	106.17	Ordina 2: A=8.975, B=1424.255, C=213.21
Elhybenzene						1.6765	N/A	N/A	88,1700	0.0120	6.0043	85.17	Option 2: A=6.876; B=1171.17; C=224.41
Hexano (-n)						0.0423	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Isopropyi benzena						1 7000	N/A	N/A	32,0400	0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol						1,4269	IVA	198	220-00				

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Naphihaisna	0.0011	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Stytene	0.0601	N'A	N'A	104.1500	0.0008	8.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene	0.2918	N/A	N/A	92.1300	8.0600	8.0033	\$2.13	Option 2: A=6.954, B=1344.8, C=210.48
Unidentified Components	8.5170	N/A	N/A	60.6S84	0.7529	8.9830	<i>11.</i> 89	
Xylenes (Mixed)	0.0756	N/A	N/A	106.1700	0.0700	0.0010	106.17	Option 2: A=7.009, B=1462.258, C=215.11

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

Stockton Tank 19 post-project ann throughput - Internal Floating Roof Tank Stockton, California

Month:	January	February	March	April .	May	June	July .	August	September	October	November	Qecembe
tim Seal Losses (1b):	22,8900	21.4210	22.5801	24,5143	10.6594	11.4851	12.0037	11.7838	11.1445	10.0731	21.9190	22.830
Seal Factor A (b-mole/1-yr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000		0.6000	0003.0	0.6000	0.6000	0.600
Seal Factor B (D-motern-yr (mph)*n):	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.400
Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid	0.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0736	0.0722	0.0683	0.0617	0.1450	0.155
Surface Temperature (psia):	6_6836	6.3968	6.6772	7.0673	3.3880	3.6161	3.7570	3.6975	3.5226	3.2234	6.5099	6.870
Tank Diameter (ft):	48.0000	48.0000	48.0000	48.0000	48.0000	48,0000		48.0000	48.0000	48.0000	48.0000	48.000
Vapor Molecular Weight (Ib/Ib-mole):	61,0000	68.0000	63.0000	63.0000	68.0000	68.0000		68.0000	68.0000	68.0000	63.0000	61.000
Product Factor:	1.0000	1,0000	1.0000	1.0000	1,0000	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.000
Vithdrawel Losses (Ib):	30.3233	30.3233	30.3233	30.3233	\$0.3233	30.3233		30.3233	30.3233	30.3233	30.3233	· 30.323 1.000
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000	1.0000	1.000
Effective Column Diameter (II):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1,0000	1.0000			
Net Throughout (gal/mo.):	7,550,000,0000 7				550,000.0000	7,560,000,000	0.0015	7,560,000,000	6.0015	0.0015	2,560,000,0000	1,580,000.000
Shell Clingage Factor (bbl/1000 soft):	0.0015 5.6000	0.0015	0.0015	0.0015 5.6000	0.0015	0.0015		5.6000	5.6000		5.6000	5.600
Average Organic Liquid Density (Ib/gal):		5.6000	5.6000					48,0000	48,0000		48.0000	48.000
Terris Diameter (1):	48.0000	48.0000	48.0000	48.0000	48.0000	<610000	+8.000	40.000	48.0000			
Deck Fitting Losses (Ib):	239.6578	224,4744	237.6688	256,8899	111.7012			123,4843	116 7850		229.6927	239.24
Value of Vapor Pressure Function:	0.1554	0.1417	0.1500	0.1621	0.0653	0.0704		0.0722	0.0683		0.1450	0.155
Vapor Molecular Weight (Ib/Io-mole):	61.0000	63.0000	68.0000	63.0000	68.0000				68,0000		63.0000	61.000
Product Factor:	1,0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000		1.0000	1.000
Tol. Roof Fitting Loss Fact (to-mole/yr):	301,8000	301.6000	301.8000	301,0000	301.8000	301.8000	301,8000	301_6000	301.8000	301.8000	301.8000	301.60
Deck Seam Losses (b):	. 0.0000	0.0000	0.0000	0.0000	0.0000				. 0.0000			
Deck Seam Length (ft): Deck Seam Loss per Unit Length	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	0.0000	0.00
Factor (b-mola/t-vrt):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Deck Seam Length Factor(1/soft);	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Tank Diameter (II):	48,0000	48,0000	48.0000	48,0000	48.0000	48.0000) 48.0000	48.0000	48.0000	48.0000		
Vapor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	63.0000	68.0000	68.0000	68.0000	68.0000	68.0000	68,0000			
Product Factor;	1.0000	1.0000	1.0000	1.0000	1,0000	1.0000) 1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Total Losses (b):	293.0611	276.2188	290.6723	311.7276	152.6839	162.1630	0 168.1156	165.5915	158.2528	145,9537	281.9350	292.39
· · · · · · · · · · · · · · · · · · ·			·				Acol Fiting Loss	Factors				
Root Fitting/Status				Quant	ty i	(Fa(b-mole/yri)	KPb(b-mole(y			m	Losses(b)	
	·					36.00		5.90		1.20	253,6522	
Nocens Harry (24-in, Diam.)/Unbolied Cover, Ung Automatic Gauge Float Well/Unbolied Cover, Unc	iter cupo				-	14.00		5.40		1.10	98.8425	
Column Well (24-In, Diam.)/Buil-Up Col-Sitting (;	47.00		0.00		0.00	331,1571	
adder Well (36-In, Diam, VSIding Cover, Ungesh					i	76.00		0.00		0.00	535,4880	
loof Leg or Hanger Well/Adjustable					4	7.90		0.00		0.00	779.2760	
anole Pipe or Well (24-in, Diam.)/Sia Fabric Set	d 10% Open				1	12.00		0.00		0.00	84.5507	
Actum Breaker (10-in, Diam, Weighted Mach, /					1	6.20		1.20		0.94	43.6846	

TANKS 4.0.9d

Emissions Report - Detail Format

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Individual Tank Emission Totals

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

Stockton Tank 19 post-project ann throughput - Internal Floating Roof Tank Stockton, California

		· · · · · · · · · · · · · · · · · · ·	Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Equilon Gasoline RVP 5.99	67.15	181.94	703.67	0.00	952.76
1,2,4-Trimethylbenzene	0.02	4.37	0.17	0.00	4.55
2,2,4-Trimethylpentane	0.84	8.55	8.77	0.00	18.16
Benzene	0.41	2.18	4.35	0.00	6.95
Cyclohexane	0.09	0.44	0.90	0.00	1.42
Ethylbenzene	0.04	2.18	0.43	0.00	2.66
Нехале (-л)	0.72	2.37	7.60	0.00	10.69
Isopropyl benzene	0.00	0.27	0.03	0.00	0.30
Methyl alcohol	0.06	0.25	0.65	0.00	0.96
Naphthalene	0.00	0.55	0.00	0.00	0.55
Styrene	0.00	0.15	0.02	0.00	0.17
Totuene	0.60	10.92	6.34	0.00	17.86
Unidentified Components	64.16	136.98	672.32	0.00	873.47
Xylenes (Mixed)	0.20	12.74	2.10	0.00	15.04
Equilon Gasoline RVP 12.5	90.53	121.29	948.73	0.00	1,160.55
1,2,4-Trimethylbenzene	0.01	2.91	0.09	0.00	3.01
2,2,4-Trimethylpentane	0.50	5.70	5.24	0.00	11,44
Benzene	0.25	1:46	2.62	0.00	4.33
Cyclohexane	0.05	0.29	0.54	0.00	0.89
Ethylbenzene	9.02	1.46	0.24	0.00	1.72
Hexane (-n)	0.44	1.58	4.65	0.00	6.67
Isopropyl benzene	0.00	0.18	0.01	0.00	
Methyl alcohol	0.04	0.17	0.38	0.00	0.58
Naphthalene	0.00	0.36	0.00	0.00	
Styrene	0.00	0.10	0.01	0.00	
Toluene	0.35	7.28	3.71	0.00	
Unidentified Components	68.75	91.32	930.03	0.00	1,110:10

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Xylenes (Mixed)	0.11	8.49	1.19	0.00	9.78
Equilion Gasoline RVP 14.0	45.72	60.65	479.11	0.00	585.48
1,2.4-Trimethylbenzene	0.00	1.46	0.04	0.00	. 1.50
2,2,4-Trimethylpentane	0.22	2.85	2.28	0.00	5.35
Benzene	0.11	0.73	1.15	0.00	1.99
Cyclohexane	0.02	0.15	0.24	0.00	0.41
Ethylbenzene	0.01	0.73	0.10	0.00	0.64
Hexano (-n)	0.20	0.79	2.06	0.00	3.04
isopropyi benzene	0.00	0.09	0.01	.0.00	0.10
Methyl alcohol	0.02	0.08	0.16	0.00	0.26
Naphthalene	0.00	0.18	0.00	0.00	0.18
Styrene	0.00	0.05	0.00	0.00	0.05
Toluene	0.15	3.64	1:60	0.00	5.39
Unidentified Components	44.94	45.66	470.97	0.00	561:58
Xylenes (Mixed)	0.05	4.25	0.50	0.00	4.79

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N-758-4-4 (Pre-Project) Tanks 4.0.9d Emissions Reports

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

Identification

Deck Fitting/Status	
Deck Characteristics Deck Fitting Category: Deck Type:	Typical Walded
Secondary Seal	Rim-mounted
Rim-Seal System Primary Seal:	Mechanical Shoe
Roof Condition:	Good
Roof Color/Shade:	White/White
Shell Condition	Good
Shell Color/Shade:	White
Paint Characteristics Internal Shell Condition:	Light Rust
Eff. Col. Diam. (ft):	1.00
No. of Columns:	1.00
Self Supp. Root? (y/n):	N
Turnovers:	365.00
Volume (gallons):	504.000.00
Fank Dimensions Diameter (It):	48.00
Description:	Storing gasoline with maximum daily throughput (1 turnover/day)
Type of Tank:	Internal Floating Root Tank
Company:	Shell Oil Products US
State:	California
User identification: City:	Stockton Tank 19 - max daily throughput Stockton

Access Hatch (24-in. Diam.)/Unboited Cover, Ungasketed Automatic Gauge Float Well/Unboited Cover, Ungasketed Column Well (24-in. Diam.)/Built-Up Col.-Silding Cover, Ungask. Ladder Well (36-in. Diam.)/Silding Cover, Ungasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-In. Diam.)/Silt Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuallon, Gask.

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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ElevilCirDrogrom Silon Maples 400 daummary diantary htm.

Quantity

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

Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stocklon, California

			ily Liquid Si peratura (di		Uquid Buik Temp	Vera	r Pressure i	(neta)	Vapor Mol	Uquid Mass	Vapor	14-1	Desis for Manual Descar
Aixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	(рала) Мах.	Weight,	Fract.	Masa Fract	Mai, Weight	Basis for Vapor Pressure Calculations
quilon Gascine RVP 14.0	Jan	55.08	51.49	58.67	91.57	6,8838	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0167	N/A	N/A	120,1800	0.0249	9.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimestylpentane						0.5161	N/A	N/A	114,2300	0.0470	0.0043	114.23	Option 2: A=0.8118, B=1257.04, C=220,74
Icnzeno						1.0172	N'A	1VA	78,1100	0.0120	9.0024	78.11	Option 2: A=6.935, B=1211.033, C=220.79
Cyclohexane						1.0585	N'A	N/A	84,1500	0.0024	0.0005	64.16	Option 2: A=0.641, B+1201.53, C-222.65
Ethylbenzene						9.0913	N/A	N/A	106,1700	0.0120	0.0002	105.17	Option 2: A=5.975, B=1424.255, C=213.21
lazane (-n)						1.5810	N'A	₩A	85.1700	0.0130	0.0043	85.17	Option 2: A=5.878, B=1171.17, C=224,41
sopropyl benzene						9.0424	N'A	N'A	120,2000	0.0015	0.0000	120.20	Option 2: A=5.963, B=1450,793, C=207.7B
Asthyl alcohol						1,2329	N/A	N/A	32.0400	9.0014	9.0003	32.04	Option 2: A=7.897, 9=1474.03, C=229.13
taphthalene						0.0011	N/A	N'A	128.1600	9,0000	0.0000	128.15	Option 2: A=6.8181, B=1585.85, C=184.32
Striene						0.0603	N'A	N/A	104,1500	0.0008	9.0000	104.15	Option 2: A=7,14, B=1574.51, C=224.09
duene						0.2827	N'A	N/A	92.1300	0.0600	0.0033	92.13	Option 2: A=6.954, B=1344.8, C=219.45
Inidani Ded Componenta						8.5331	N/A	N/A	0323.00	0.7529	0.9830	77.89	
(ylanes (Mixad)						0.0759	N¥A	N/A	105.1700	0.0700	0.0010	105.17	Ontion 2: A=7.009, 9=1482.268, C=215.11
ution Gasobne RVP 12.5	Feb	57.96	53.17	62,75	61.67	8.3938	N/A	N/A	63.0000	0.0700	0.0070	82.50	Option 4: RVP=12.5, ASTM Slope=3
2.4-Trimetrybenzene						0.0188	N/A	N/A	120.1900	0.0240	0.0001	120.15	Option 2: A=7.04383, B=1573.287, C=208.56
2.4-Trimetryloentane						0.5615	N/A	N/A	114,2300	0.0470	0.0054	114.23	Option 2: A=6.8118, B= 1257.84, C=220.74
lenzen4	•					1,1033	N/A	N/A	78,1100	9.0120	9.0027	78.11	Option 2; A=6.905; B=1211.033; C=220.79
Volonezane						1,1459	N/A	N/A	84.1600	0.0024	0.0006	84.16	Option 2: A=6.841, 9=1201.53, C=222.65
lindonzana						0.1010	NVA	N/A	106,1700	0.0120	9.0002	106.17	Option 2: A=6.975, B=1424,255, C=213,21
lexane (-n)						1.8140	N/A	N/A	85,1700	0.0130	0.0048	85.17	Option 2: A=6.876, B=1171.17, C=224.41
sapropyl benzene						9.0473	N/A	N/A	120,2000	0.0015	9.0000	120.20	Option 2: A=6.963, B=1450.783, C=207.78
iethyl alcohol						1.3519	ÍVA	N/A	32.0400	0.0014	0.0004	32.04	Option 2; A=7.897, B= 1474.09, C=229.13
vischihatene						0.0013	N/A	N/A	126,1603	0.0030	0.0000	128_18	Option 2: A=6.81B1, 9=1585.86, C=184.32
iyrene						9,0668	N/A	N/A	104,1500	9.0008	9,0000	104,15	Option 2: A=7.14, B=1574.51, C=224.09
Toluane						0.3097	N/A	N/A	82,1305	9.0600	0.0033	92,13	Option 2: A=6.954, B=1344,8, C=219.48
Internation Components						7.6164	N/A	N/A	62.6258	9,7529	0.9807	77_89	
Kylenas (Mixed)						5.0841	N'A	N/A	106.1700	9.5700	9.0012	106.17	Option 2: A=7.009, B=1462.266, C=215.11
ullon Gasoline RVP 12.5	Mar	60.22	54.36	86.07	61.57	8.6772	N/A	N/A	63.0000			82.50	Option 4: RVP+12.5, ASTM Slope-3
2.4-Trime#ybenzene		-	-			0.0206	N/A	N/A	120,1900	0.6240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.5
2,2.4 Trimethylipeniana						0.5994	N'A	N/A	114,2300	0.0470	0.0055	114,23	Option 2: A=6.8118, B=1257.84, C=220.74
lenzene						1,1749	N/A	N/A	78,1100	0.0120	0.0025	78.11	Option 2: A=0.905, B=1211.033, C=229.79
Cyclohexane						1,2186	N/A	N/A	84,1600	9.0024	0.0006	84,16	Option 2: A=6.641, B=1201.53, C=222.65
inylanzene						0.1094	N'A	N/A	106.1700	0.0120	0.0003	108.17	Option 2: A-8.975, B+1424,255, C=213.21
texane (-n)						1.9242	N/A	N/A	86.1700	0.0130	0.0049	86.17	Option 2: A=8.876, B=1171.17, C=224.41
sopropyl benzene						0.0515	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=5.963, B=1460.793, C=207.78
Activi alcohol						1,4520	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7.897, B+1474.08, C=229.13
Naphinciene						0.0015	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, 8+1585.68, C=184.32
Styrene						0.0724	N/A	N/A	104.1500	0.0003	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.3324	N/A	N/A	92.1300	0.0600	0.0039	92_13	Option 2: A=5.954, B=1344.8, C=219.48
Unider#lied Components						8.2582	N/A	N'A	62.6168	0.7529	0.9803	77,89	

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TANKS 4.0 Report

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Xylencs (Mixed) Equilion Gasoline RVP 12.5	• • •			_		0.0911	N/A	N/A	106.1700	0.0700	0.0013	106.17	Option 2: A=7.009, 8=1462.268, C=215.11
•	Apr	63.26	55.9B	70.54	B1_57	7.0673	N/A	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-TrimeDybenzene						0.0233	N/A	N/A	120.1900	0-0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0.6539	N/A	N/A	114,2300	8.0470	0.0057	114.23	Option 2: A=8.8118, 8=1257,84, C=228.74
Benzene						1.2775	N/A	N/A	78.1106	8.0120	0.0029	78.11	Option 2: A=5.905, B=1211.033, C=220.79
Cyclohavane						1.3224	N/A	N/A	84,1600	0.0024	0.0005	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Elhylbenzene						D.1215	N/A	N/A	105.1700	6.0120	0.0003	108.17	Option 2: A=6.975, B= 1424.255, C=213.21
Hexane (-n)						2.0815	N/A	N/A	66.1700	8.0139	0.0060	ES.17	Option 2: A=6.876, B=1171.17, C=224.41
hopropyl benzane						0.0577	N/A	N/A	120.2000	0.0015	0.0000	120.20	Op5on 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.5963	N/A	N/A	32.0400	0.0014	8,0004	32.04	Option 2: A=7_897, B=1474.08, C=229.13
Naphthalene						0.0017	N/A	N/A	128.1600	0.0030	0.0000	125,16	Option 2: A=6.8181, 8=1585.86, C=184.32
Styrene						0.0804	N/A	N/A	104.1500	0.0005	0.0000	10415	Oction 2; A=7.14, 8=1574.51, C=224.09
Toluane						P.3651	N/A	1J/A	92.1300	0.0500	0.0041	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						8,7363	N/A	NA	62.6045	0.7529	0.9797	77.89	•
Xylenes (Mixed)						0,1013	N⁄A	N/A	108,1706	0.0700	0.0013	108.17	Option 2: A=7.009, B=1462,266, C=215.11
Equilon Gasoline RVP 5.99	May	67.10	58.83	75.38	61.57	3.3880	NVA	N/A	68.0000			82 50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethybenzens						0.0270	ŃA	N/A	120,1900	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpeniane						0.7284	N/A	N/A	114,2300	0.0470	0.0123	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzane						1,4173	N/A	N/A	78.1106	0.0120	0.0061	78,11	Option 2: A=6.905, 8=1211.033, C=220.79
Cyclohexane						1,4635	N'A	N/A	84,1600	8.0024	0.0013	84.16	Option 2: A=6.641, B=1201.53, C=222.65
Ethylbenzena						D.1384	N/A	NA	106.1700	0.0120	0.0006	106.17	Option 2: A+6.975, B=1424.255, C+213.21
Hezane (-n)						2.2945	N/A	N/A	56,1706	0.0130	0.0107	86.17	Option 2: A=6.876, 8=1171,17, C=224.41
hopropyl benzana						0.0664	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl sicohol						1,7958	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0021	N#A	N/A	128,1600	8.0038	6.0000	129, 16	Option 2: A=6.8181, B=1585.86, C=184.32
Shyrene						0.0917	N/A	N/A	104,1500	8,0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene							N'A	N/A	92,1300	0.0000	0.0000	92.13	Option 2: A=6.954, B=1344.0, C=219.48
Unidentified Components						0.4103	N/A	N/A				77.89	Opadi 2: And 334, Dr (3442), Or218,40
,						4,1069	N/A	N/A	87.2221	0.7529 0.0700	0.9562 0.0029	106.17	Option 2: A=7.009, B=1462.256, C=215.11
Xylenes (Mixed)	•					0.1155	N/A		106,1700	00/00	0.0029	100.17 82.50	Option 4; RVP=5.99, ASTM Slope=3
Equilan Occorre RVP 5.89	አጣ	70.33	B1.45	79.22	91.57	3.6161		N/A	68.0000		0.0002	120.19	•
1,2,4-Trimethytoenzene						0.0308	N/A	N/A	120.1900	6.0240			Option 2: A=7.04363, B=1573.267, C=205.56
2,2,4-Trimelbytpentane						0.7967	N/A	N/A	114,2300	0.0470	0.0126	114.23	Option 2: A=6.6118, B=1257.84, C=220.74
Benzane						1.5449	N/A	N/A	79.1100	0.0120	0.0062	78.11	Option 2: A=6.905, B=1211.030, C=220.79
Cyclohexane						1.5922	N/A	N/A	B4.1600	9.0024	0.0013	64.16	Option 2: A=6.841, B=1201.53, C=222.85
Elhyberzene						8.1542	N/A	N/A	105.1700	0.0120	0.0008	106,17	Option 2: A=5.975, B=1424.255, C=213.21
Havane (-n)						2.4680	N/A	N/A	86.1700	0.0130	0.0109	65.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropy) benzene						0.0746	N/A	tua	120.2000	6.0015	0.0000	120.20	Option 2: A=6.963, B=1450.783, C=207.78
Methyl alcohol						1,9820	N/A	N∛A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Nachthalene						0.0025	N/A	N/A	128.1900	D.0030	0.0000	128.16	Option 2: A=6.8181, 8=1585.86, C=184.32
Styrene						0.1023	N/A	N/A	104.1500	6.0008	B.0000	184.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.4520	N/A	NYA	92.1300	0.0600	9.0091	92.13	Option 2: A=6.954, B=1344.8, C=218,48
Unidentified Components						4.3817	N/A	N/A	67.2114	0.7529	0.9551	77.89	
Xylenes (Mixed)						6.1288	NVA	N/A	106.1700	6.0700	0.0030	106.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasoline RVP 5.99	Jul	72,25	63.02	61.48	61.57	3.7570	N/A	NYA	68,0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0329	N/A	NA	120.1900	0.0240	0.0003	120,19	Option 2: A=7.04383, B=1573.287, C=208.56
2,2,4-Trimothylpontane						0.8398	N/A	N/A	114,2300	6.0470	0.0127	114.23	Option 2: A=8.8118, 8=1257.84, C=220.74
Benzene						1.6250	N/A	N/A	78.1100	6.0120	0.0063	76.11	Option 2: A=6.905, B=1211.833, C=220.79
Cycloherane						1.6728	N/A	N/A	84,1600	B.0024	0.0613	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1642	N/A	N/A	106.1700	0.0120	8.0006	106.17	Option 2: A=8.975, 9=1424.255, C=213.21
Hetarw (-n)						2.6088	N/A	N/A	66.1700	<i>e</i> .0130	0.8110	68.17	Option 2; A=5.876, 8=1171.17, C=224.41
Isopropyl benzena						0.6795	N/A	N/A	120.2000	0.0015	0.0006	120.20	Option 2: A=8.963, B=1460.793, C=207.78
Methyl alcohol						2.0992	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0027	N/A	N/A	128.1600	8.0030	0.0000	128.16	Option 2: A=6.9181, B=1585.28, C=164.32
Slymone						0.1091	N/A	N/A	104.1500	0.0008	8.0006	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						5.4764	N/A	N/A	92.1300	0.0600	6.0093	92,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4.5501	N/A	N/A	87.1990	0.7529	6.9544	77 E9	
Xylenes (Mired)		_				0.1373	N'A	N/A	106.1700	8.0700	6.0031	106.17	Opdon 2: A=7.009, B=1452.268, C=215.11
Equilon Gasoline RVP 5.99	Aug	71,45	62.64	80.06	61.57	3.6975	N/A	N/A	68.0000			82.50	Option 4: RVP-5.99, ASTM Slope+3
1,2,4-Trimetryberzene						6.0318	N/A	N/A	120.1900	0.0240	6.0003	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylpentane						0.8214	N/A	N/A	114,2300	0.0470	6.0127	114.23	Option 2: A=6.8118, 8=1257,84, C=220,74
Genzene						1.5918	N'A	N/A	78.1100	9,0120	0.0063	78.11	Option 2: A=6.905, B=1211.033, C=220.78

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Cyclohexane						1.6388	N/A	N/A	84,1600	8.0024	0.0013	84.16	Option 2: A=6.841, 8=1201.53, C=222.65
Einyborzene						0.1599	N/A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424,255, C=213.21
Havene (-n)						2.5576	N/A	N/A	85.1700	0.0130	0.0109	65.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0776	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=5.953 B=1450,793, C=207.78
Methyl alcohol						2.0494	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.297, 8=1474.08, C=229.13
Naphthalene						0.0028	N/A	N/A	128,1600	8.0030	0.0000	129.16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.1052	Ň/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C+224.09
Taluena						0.4572	N/A	N/A	92.1300	0.0600	0.0092	52.13	Option 2: A=6.954, 8=1344.8, C=218.48
Unidentified Components						4.4790	N/A	N/A	67.2042	0.7529	0.9547	77.89	•
Xylenes (Mixed)						0.1337	Ń/Ă	N/A	106,1700	0.0700	0.0031	106.17	Option 2: A=7.009, B=1462.256, C=215.11
Equilon GasoEne RVP 5.99	Sep	69.03	91,28	76.77	61.57	3.5226	N/A	N/A	69.0000			82.50	Option 4: RVP+S.99, ASTM Slope-3
1.2.4-Trimetrybenzene						0.0291	N/A	N/A	120,1900	0.0240	0.0002	120.19	Option 2; A=7.04383, B=1573.267, C=203.56
2,2,4-Trimethylpentane						0.7685	N/A	N/A	114,2300	0.0470	0.0124	114.23	Option 2: A=6.8119, B=1257.84, C=220.74
Bonzene						1.4923	N/A	N/A	79.1100	0.0120	0.0062	78.11	Option 2; A=6.905, B=1211.033, C=220.79
Cycloherane						1.5392	N/A	N/A	84,1600	0.0024	0.0013	84.16	Option 2: A=6.841, B+1201.53, C=222.65
Elhylpenzene						0.1476	N/A	N/A	106.1700	0.0120	0.0006	F06,17	Option 2: A=6.975, 9=1424.255, C=213.21
Haxane (-n)						2,4063	NA	N/A	88.1700	0.0130	0.0108	65.17	Option 2; A=6.876, B=1171.17, C=224.41
Isopropyl benzane						0.0712	N/A	N/A	120.2000	8.0015	0.0000	120.20	Option 2: A=6.963, B=1450.793, C=207.78
Methyl alcohol						1,9054	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalere							N/A	N/A					·
Siyrene						0.0023			128,1600	0.0030	0.0000	125.16	Option 2: A=5.8181, B=1585.86, C=164.32
•						0.0979	N/A	N/A	104,1500	8000.0	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
						0.4347	N/A	₩A	82.1300	0.0600	0.0090	82.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentilled Components						4.2598	N/A	N¥Ă	67.2197	0.7529	0.9555	77,69	
Xylenes (Mixed)	_					0.1233	N/A	N/A	106.1700	0.0700	0.0030	108.17	Option 2: A=7.009, B=1452.266, C=215.11
Equilon Gasoline RVP 5.09	Oci	64.94	58.13	71,16	61.57	3.2234	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1.2.4-Trimetrybanzena						0.0246	N'A	N/A	120.1900	0.0240	0.0002	120.19	Option 2: A=7,04383, B=1573,297, C=208.5t
2,2,4-Trimethylcentane						0.6800	N/A	N/A	114.2300	0.0470	0.0120	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3266	N/A	N/A	78.1100	0.8120	0300.0	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3720	N/A	N/A	84.1600	8.0024	0.0012	64.16	Option 2: A=5.841, 8=1201.53, C=222.65
Ethylbenzene						0.1274	N!A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424,255, C=213.21
Hexane (-o)						2.1564	N/A	N/A	66.1700	0.0130	8.0108	\$6.17	Option 2: A=6.878, 9=1171,17, C=224.41
Isopropyl benzena						0.0607	N/A	N/A	120.2000	6.0015	8.0000	120.20	Option 2: A=6.953, 8=1460,793, C=207.78
Methyl alcohol						1,6668	N/A	N/A	32.0400	0.0014	8.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naprthalene						0.0019	N/A	N/A	128.1600	0.0030	8.0000	128.16	Option 2: A=6.8181, B=1585.88, C=184.32
Styrene						0.0844	N¥A	N/A	104.1500	0.0008	0.0000	104,15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0,3809	N/A	N/A	92,1300	0.0900	0.0065	62.13	Option 2: A+6.954, 8+1344.8, C=216.40
Unidentified Components						3.9117	N/A	N/A	57.2478	0.7529	8.9570	77.89	
Xylenes (Mixed)						0.1062	N/A	N/A	108,1700	8.8700	0.6028	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equion Gasoline RVP 12.5	Nov	58.97	54,21	63.53	61.57	6.5099	N/A	N∕A	63,0000			62.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethybenzane						8.0195	N/A	N/A	120.1900	0.0240	0.0001	120.19	Oction 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane						0,5765	N/A	N/A	114,2300	8.0478	0.0055	114.23	Opdon 2: A=6.8118, B=1257.84, C=220.74
Benzene						1,1317	N/A	N/A	78.1100	0.0120	0.0027	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.1748	N/A	N/A	84.1600	0.0024	0.0008	84.10	Option 2: A=5.841, B=1201.53, C=222.65
Ethylbenzarie						0.1043	N/A	N/A	108.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424,255, G=213,21
tiexane (-n)						1,6578	N/A	N/A	86,1700	0.0130	8.0049	65.17	Oction 2: A=6.876, 8=1171.17, C=224.41
Isopropyl benzene						0.0490	N'A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl e cohol						1,3915	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7,E97, B=1474.08, C=229.13
fizphthelene						0.0014	N/A	N/A	128,1600	0.0030	0.0000	129.18	Option 2: A=6.8191, B=1585.86, C=184.32
Styrene						0.0690	N/A	N/A	104.1500	0.0003	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.69
Totuene						0.3187	N/A	N/A	92.1300	0.0600	0.0038	92,13	Option 2: A=6.854, B=1344.8, C=219.48
Unidentified Components						8.0529	N/A	N/A	62.6222	0.7529	8.9906	77,29	
Xylanes (Mared)						0.0868	N/A	N/A	106.1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1452.265, C=215.11
Equion Gaseine RVP 14.0	Dec	54,98	51.51	58,44	61.57	6.6705	N/A	N/A	81.0000			62.50	Option 4: RVP=14, ASTM Stope=3
1.2.4-Trimethybenzero			• • • •		··	0.0167	N/A	NVA	120,1900	0,0240	0.0001	120.19	Option 2: A=7.04383, 8=1573.267, C-208.56
2.2.4-Trimethylpeniano						D.5145	N/A	N/A	114,2300	0.0470	0.0048	114.23	Option 2: A=6.8116, B=1257.84, C=220.74
Benzine						1.0143	N/A	N/A	78.1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=220.76
Cyclohexane						1,0556	Ñ/A	N/A	84,1600	0.0024	D.0005	84,18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylberzene				•		0.0909	N'A	N/A	106,1700	0.0120	0.0002	196.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.8765	N/A	N/A	86.1700	0.0130	0.0043	86.17	Option 2: A=6.876, B=1171.17, G=224.41
tsopropyl benzene						0.0423	N/A	N'A	120,2000	0.0015	0.0000	120.20	Option 2; A=6.963, 6=1460.793, C=207.78
Methyl alcohol						1,2259	N/A	N'A	32.0400	0.0014	0.0000	32.04	Option 2: A=7.897, B=1474.08, C=229.13

Naphihalang	0.0011	N/A	N/A	128,1500	0.0030	0.0000	128.16	Option 2: A=6.6181, B=1565.66, C=184.32
Shrene	0.0601	N/A	N/A	104.1500	8000.0	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena	0.2618	N'A	N/A	92.1300	0.0600	0.0033	82.13	Option 2: A=8.954, B=1344.B, C=219.48
Unidentified Components	8.5170	N/A	N/A	60.6584	0.7529	0.9830	77.89	
Xylenes (Mixed)	0.0758	N/A	N/A	106,1700	0.0700	0.0010	106.17	Option 2: A=7.009, B=1452.256, C=215.11

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

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Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stockton, California

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	January	February	March	April	May	June	July	August	September	October	November	December
Rim Sazi Losses (b):	22,8900	21.4210	22,6801	24,5143	10.6594	11,4851	12.0037	11.7839	11,1445	10.0731	21,9190	22.830
Sezi Factor A (Ib-mole/II-yr):	0.6000	0.5000	0.6000	0.6000	0.6000	0.6000	9.6000	0.6000	0.6000	0.6000	0.6000	0.600
Seal Factor B (ID-mole/II-yr (mph)*n):	0.4000	9.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.400
Value of Vapor Pressure Function: Vector Pressure at Delly Average Liquid	0.1564	Q.1417	0.1500	0.1521	0.0653	0.0704	0.0735	0.0722	0.0683	0.0617	0.1450	0.155
Surface Temperature (psia):	6-8836	6.3988	6.5772	7.0673	3_3880	3.6161	3.7570	3.6975	3.5225	3,2234	6.5099	6.970
Tank Diameter (ft):	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48,0000	48.0000	48.000
Vapor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	53.0000	63.0000	68.0000	68.0000	68.0000	68.0000	68.0000	68.0000	63.0000	61.000
Product Factor:	1.0000	1.0000	1.9000	1.0000	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Withdrawel Losses (Ib):	61.4890	61,4890	61.4890	61.4890	61.4890	61.4890	61.4890	61.4850	61.4890	61,4890	61,4890	61,489
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Effective Column Diameter (ft):	1.0000	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Net Throughout (gaVmo.):	15.330,000.000015,							20,000.000015	330,000.000015;	30,000.000015	,330.000.000015	,230,000,000
Shell Clingage Factor (bbl/1000 solu):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0,0015	0.0015	0.0015	0.0015	0.0015	0.001
Average Organic Liquid Density (b/gal)	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.500
Tarik Diameter (11):	45.0000	48.0000	48,0000	48.0000	48.0000	48.0000	45.0000	43.0000	48.0000	48.0000	48.0000	45.000
Deck Fitting Losses (Ib):	239.6678	224 4744	237.6688	256.8899	111.7012	120.3546	125.7685	123.4843	116.7850	105.5573	229,£927	233.24
Value of Vapor Pressure Function:	0.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0735	0.0722	0.0583	0.0617	0.1450	0.155
Vepor Molecular Weight (brib-mole):	61,0000	63.0000	63.0000	63.0000	68.0000	68.0000	68.0000	68.000	68.0000	68.0000	63.0000	61.000
Product Factor:	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.9000	1.0000	1.0000	1.00
Tot. Roci Fitting Loss Fact.(ib-mole/yr):	301_6000	301.6000	301.6000	301,8000	301,6000	301,8000	301.8000	301.8000	301,8000	301_8000	301.8000	301.60
Deck Seam Losses (b):	0.0000	0.0000	0.0000	0.0000	6.0000	0.0000	0.0000	0,0000	0.0000	6.0000	0.0000	0.00
Deck Seam Length (ft): Deck Seam Loss per Unit Length	0000.0	0.000	00000	0,0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.0000	0.000
Factor (to-moleft-yr);	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0006	0.0000	0.0000	0.00
Deck Seam Length Fector(1/soft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.0000	0.0000	0.0000	0.0000	0.00
Tank Diameter fit):	48.0000	48,0000	48.0000	48,0000	48.0000	48,0000	48.0000	48.0000	45,0000	48.0000	48,0000	48.00
Vepor Motecular Weight (Ib/Ib-mole);	61,0000	63.0000	63,0000	63.0000	68.0000	0000.83	68,0000	63.0000	£3.0000	69,0200	63.0000	61.00
Produci Factor:	1.0000	1,0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Tetal Losses (b):	324.2468	307.3844	321,8379	342.6832	183.8495	183.3287	109,2813	196.7571	189.4185	177,1193	313.1007	323.56
Roof Filling/Status				Ou	ມາຈິງ	KFs(b-moleyr)	Roof Fitting Loss Kfo(b-mole/iv)				Loeses(fb)	

Access Hatch (24-in, Diam, Winhofted Cover, Ungaskeled	1	38.00	5.90	1.20	253.6522
Automatic Gauge Float Well-Unbolted Cover, Ungasketed	1	14.00	5.40	· 1.10	88.6425
Column Well (24-in, Diam, /Built-Up ColSitting Cover, Ungask,	1	47.00	0.00	0.00	331,1571
Ladder Well (36-th, Diam, VSiding Cover, Ungaskated	1	76.00	0.00	0.00	535,4880
Roof Leg or Hanger Well/Adjustable	14	7,90	0.00	0.00	779.2760
Sample Pipe or We8 (24-in, Diam, VSH Fabric Seal 10% Open	1	12.00	0.00	0.00	84.5507
Vacuum Greaker (10-in. Dizm.) Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	43.6846

TANKS 4.0.9d Emissions Report - Detail Format

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Individual Tank Emission Totals

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

Stockton Tank 19 - max daily throughput - Internal Floating Roof Tank Stockton, California

		Losses(lbs)											
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions								
Equiion Gasoline RVP 5.99	67.15	368.93	703.67	0.00	1,139.75								
1,2,4-Trimethylbenzene	0.02	8.85	0.17	0.00	9.04								
2.2,4-Trimethylpentane	0.84	17.34	8.77	0.00	26.95								
Benzene	0.41	4.43	4.35	0.00	9.19								
Cyclohexane	0.09	0.89	0.90	0.00	1.87								
Ethylbenzene	0.04	4.43	0.43	0.00	4.90								
Hexane (-n)	0.72	4.80	7.60	0.00	13,12								
tsopropyl benzene	0.00	0.55	0.03	0.00	0.58								
Methyl alcohol	0.06	0.52	0.65	0.00	1.23								
Naphthalene	0.00	1.11	0.00	0.00	1.11								
Styrene	0.00	0.30	0.02	0.00	0.32								
Toluene	0.60	22,14	6.34	0.00	29.08								
Unidentified Components	64.16	277,77	672.32	0.00	1,014.25								
Xylenes (Mixed)	0.20	25.83	2.10	0.00	28.13								
Equilon Gasoline RVP 12.5	90.53	245.96		0.00	1,285.22								
1.2,4 Trimethylbenzene	0.01	5.90	0.09	0.00	6.00								
2,2,4-Trimethylpentane	0.50	11.56	5.24	0.00	17_30								
Benzene	0.25	2.95		0.00									
Cyclohexane	0.05	0.59		0.00	1.19								
Elhylbenzene	0.02			0.00									
Hexane (-n)	0.44			0.00	8.29								
lsopropyl benzene	0.00			0.00									
Methyl elcohol	0.04			0.00									
Naphihalene	0.00												
Slyrene	0.00			0.00									
Toluene	0.35			0.00									
Unidentified Components	88.75	185.18	930.03]0.00	1,203.88								

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Xylenes (Mixed)	0.11	17.22	1.19	0.00	18.52
Equilon Gasoline RVP 14.0	45.72	122.98	479,11	0.00	647.81
1,2,4-Trimethylbenzene	0.00	2.95	0.04	0.00	2.99
2,2,4-Trimethylpentane	0.22	5.78	2.28	0.00	8.28
Benzene	0.11	1.48	1.15	0.00	2.73
Cyclohexane	0.02	0.30	0.24	0.00	0.56
Ethylbenzene	0.01	1.48	0.10	0.00	1.59
Hexane (-n)	0.20	1.60	2.06	0.00	3.8
Isopropyl benzene	0.00	0.18	0.01	0.00	0.19
Methyl alcohol	0.02	0.17	0.16	0.00	0.3
Naphthalene	0.00	0.37	0.00	0.00	0.3
Styrene	0.00	0.10	0.00	0.00	0.1
Toluene	0.15	7.38	1.60	0.00	9,1
Unidentified Components	44.94	92.59	470.97	0.00	608.5
Xylenes (Mixed)	0.05	8.61	0.50	0.00	9.1

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

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Identification

User identification:	Stockton Tank 19 pre-project ann throughput										
City:	Stockton										
State:	California										
Сотралу:	Shell Oil Products US										
Type of Tank:	Internal Floating Roo! Tank										
Description:	Storing gasoline with meximum annual pre-project throughput (1,250,000 gal/month)										
	oround describe with moviment annothing his broker interdubat (theoring damaged)										
Tank Dimensions											
Diameter (It):	48.00										
Volume (gallons):	504.000.00										
Turnovers:	29.76										
Self Supp. Rool? (y/n):	N 20110										
No. of Cotumns:	1.00										
	1.00										
Eff. Col. Diam. (II):	1.00										
Paint Characteristics											
Internal Shell Condition:	Light Rust										
Shell Color/Shade:	WhiteWhite										
Shell Condition	Good										
Roof Color/Shade:	White/White										
Roof Condition:	Good										
Ruu Cunaturi.	5000										
Rim-Seal System											
Primary Seal:	Mechanical Shoe										
Secondary Seal	Rim-mounted										
Deck Characteristics											
Deck Fitting Category:	Typical										
Deck Type:	Welded										
реск тура.	44 Q1UQU										
Deck Fitting/Status											

Automatic Gauge Float Well/Unbolted Cover, Ungasketed Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. Ladder Well (36-in. Diam.)/Sliding Cover, Ungasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breakar (10-in. Diam.)/Weighted Mech. Actuation, Gask.

Meterological Data used In Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psla)

Quantity

1 1 1

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

Stockton Tank 19 pre-project ann throughput - Internal Floating Roof Tank Stockton, California

Mixture/Component M			Deily Liquid Surt. Temperature (deg F)		Liquid Butk Temp	Vacor Pressure (osta)		Vapor Mol.	Liquid Mass	Vapor Mass	Mal	Basis for Vacor Pressure	
	Month	Avg.	Kin.	Max.	(deg F)	Avg.	Min,	Max.	Weight	Fraci.	Fract	Weight	Calculations
Equilon Gasoline RVP 14.0	י	55.03	51.49	58.67	61,57	6.8836	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTNI Stope=3
1,2.4-Trimethylbenzene						0.0167	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentzna						0.5161	N/A	N/A	114,2300	0.0470	0.0048	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0172	N/A	N/A	78.1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1,0588	N/A	NVA	84.1600	0.0024	0.0005	84.16	Option 2: Ae6.841, B=1201.53, C=222.65
Ethylbenzena						0.0913	N'A	N/A	106,1700	0.0120	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Henculae (-n)						1.6910	N/A	NVA.	B5.1700	0.0130	0.0043	85.17	Option 2: A=6.876, B=1171.17, C=224.41
sopropyt benzene						0.0424	N/A	N/A	120,2000	0.0015	0.0000	120,20	Option 2: A=6.953, B=1450.793, C=207.78
Methyl Elophol						1,2329	N/A	NA	32.0400	0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0011	N/A	N/A	128.1600	0.0030	0.0000	128_16	Option 2: A=6.8181, 8= 1585.86, C=184.32
Styrone						8.0603	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B= 1574.51, C=224.09
Toluene						0.2827	N/A	N/A	92.1300	0.0600	0.0033	92.13	Option 2: A-6.954, 8-1344.8, C=219.48
Unidentified Components						8.5331	N/A	NA	60.6580	0.7529	0.9830	77.89	
Xylenes (Wixed)	- .					0.0759	N/A	N/A	108.1700	0.0700	0.0010	105.17	Option 2; A=7.009, 8=1452.268, C=215.11
iguiton Gescline RVP 12.5	Feb	57.96	53.17	62.75	61.57	6.3968	N/A	N/A	63.0000			62.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethybenzene						0.0168	N/A	N/A	120.1900	0.0240	0.0001	120.16	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4. Trimethylpentane Benzene						0.5615	N/A	N/A	114.2300	B.0470		114,23 78,11	Option 2: A=6.8118, B=1257.84, C=220.74
						1.1033	NA	N/A	78.1100	0.0120	0.0027	78.11 84.16	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane Ethylosnzene						1,1459	N/A	N/A	64.1600 106.1700	0.0024	0.0005	106.17	Option 2: A=6.841, B=1201.53, C=222.65 Option 2: A=6.975, B=1424.255, C=213.21
Hazana (-n)		•				0,1010 1,8140	NVA N/A	N/A N/A	89.1700	0.0130	0.0048	26.17	Option 2: A=0.876, B=1171.17, C=224.41
Isopropyi benzene						0.0473	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=8.963, B=1460.793, C=207.78
Mathyf alcohol						1,3519	N/A	NVÁ	32,0400	B.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Nachthelene						0.0013	N/A	NVA	128,1600	0.0030	6.0000	128.16	Option 2: A=6.B1B1, B=1585.B6, C=184.32
Styrone						0.0668	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluane						0.3097	N/A	N/A	92,1300	0.0600	0.0038	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						7.9184	NA	N/A	62,6258	0.7529	0.9807	77.89	
Xylenes (Mazel)						0.0841	N/A	N/A	106.1700	0.0700	0.0012	108,17	Option 2: A=7.009, B=1452.265, C=215.11
guilon Gasoline RVP 12.5	Mar	60.22	54.36	66.07	61.57	9.8772	N/A	N/A	83.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0206	N/A	N/A	120.1900	0.0240	0.0001	120_18	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimothylpentane						0.5994	N'A	N/A	114,2300	0.0470	0.0055	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1,1749	N/A	N/A	78,1100	0.0120	0.0028	78.11	Option 2: A=6.905, B=1211.033, C=220.70
Cyclohazana						1.2168	N/A	NVA	64,1600	0.0024	0.0008	84,18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1094	N/A	N/A	106.1700	0.0120	0.0008	108.17	Opton 2: A=6.975, B=1424.255, C=213.21
Henano (-n)						1.9242	NVA	NA	06.1700	6.0130	0.0049	69.17	Option 2: A=6.878, B=1171.17, C=224.41
sopropyl benzane						0.0515	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.953, B=1450.793, C=207.78
Mesnyl eloohol						1.4520	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7,897, B=1474.08, C=229.13
Naphihalene						0.0015	N/A	N/A	128.1600	0.0030	0.0000	128.18	Option 2: A=6.8161, B=1585.88, C=184.32
Styrene						0.0724	N/A	NVA	104,1500	0.0003	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tolucne						0.3324	N/A	NVA	92,1300	0.0600	0.0039	92.13	Option 2: A=6.954, 8=1344.8, C=219.48
Unidentified Components						0.2582	N/A	N/A	62.8168	0.7529	0.9803	77_69	

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TANKS 4.0 Report

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Xylenes (Mixed)	_					0.0911	N/A	N/A	105.1700	0.0700	0.0013	106,17	Option 2: A=7.009, B=1462.266, C=215.11
Equion Gaseline RVP 12.5	Apr	63.26	55. 98	70.54	61.57	7.0673	NA	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethylbonzene						0.0233	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpontene						0.6539	N/A	NVA.	114.2300	0.0470	0.0057	114.23	Option 2: A=6.8118, B=1257.84, C=220.74 Option 2: A=6.905, B=1211.033, C=220.79
Benzene						1.2775	NA	N/A	75.1100	0.0120	0.0028	78.11	
Cyclohexare						1.3224	N/A	N/A	84,1600	0.0024	0.0006	84.18	Option 2: A=6.841, B=1201.53, C=222.65 Option 2: A=6.975, B=1424.255, C=213.21
EUtybenzene						0.1215	N/A	NVA	108.1700	0.0120	0.0003	106.17	Option 2: A=6.875, B=1171.17, C=224.41
Herane (-n)						2.0815	NA	N/A	86.1700	0.0130	0.0050	85,17	Option 2: A=6.963, B=1460.783, C=207.78
tsopropyl benzene						0.0577	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol						1,5969	N/A	N/A	32.0400	0.0014	0.0004	32.04 128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Naphthalane						8.0017	N/A	N/A	128.1600	9.0030	0.0000		
Styrene						0.0804	N/A	N/A	104,1500	0.0008	0.0000	104.15 92.13	Option 2: A=7.14, B= 1574.51, C=224.09
Toluene						0.3651	N/A	N/A	92,1300	0.0600			Option 2: A=8.854, B=1344.8, C=219.48
Unidentified Components						8.7369	NA	N/A	62.6045	0.7529	0.9707	77,83 106.17	Option 2: A=7.009, B=1452.255, C=215.11
Xyfenes (Mixed)						0.1013	N/A	N/A	105.1700	0.0700	0.0013		
Equilon Gesoline RVP 5.09	May	67.10	58.83	75.36	\$1.57	3.3880	N/A	N/A	58.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-TrimeStylbenzene						0.0270	N/A	N/A	120,1900	0.0246	0.0002	120.19	Option 2: A=7_04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane						0.7284	N/A	N/A	114.2300	0.0470	0.0123	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Benzene						1.4173	N/A	N/A	75.1100	0.0120	0.0061	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohezane						1.4635	N/A	N/A	84,1600	0.0024	0.0013	84.16	Option 2: A=6.041, B=1201.53, C=222.65
Elhybonzene						0.1384	N/A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B= 1424.255, C=213.21
Hexene (-n)						2,2945	N/A	N/A	66.1700	0.0133	0.8107	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0664	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl alcohol						1,7968	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897 B=1474.08, C=229.13
Nzphihalone						0.0021	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=5,8181, B=1585,86, C=184.32
Styrena						0.0917	N/A	N/A	104.1500	0.0008	0.0000	184.15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene						0.4103	N/A	N/A	82.1300	0.0600	0.0065	92,13	Option 2: A=6.854, B=1344.8, C=219.48
Unidentified Components						4.1089	N/A	N'A	67.2321	0.7529	0.9562	77_£9	
Xylenes (Mixad)						0.1155	N/A	N/A	106.1700	0.0700	0.0029	185.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilon GasoEne RVP 5.99	Jun	70.33	61.45	79.22	61.57	3.6161	N/A	N/A	68.0000			62.50	Option 4: RVP=5.99, ASTM Slape=3
1,2,4-Trimothylbonzena						0.0306	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0,7967	N/A	N/A	114.2300	0.0470	0.0128	114.23	Option 2: A=6.8118, Be1257.84, C=220.74
Benzene						1.5449	N/A	N/A	76.1100	0.0120	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexana						1.5322	N/A	N/A	84.1600	0.0024	0.0013	84,16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylberizena						0.1542	N/A	N/A	106,1700	8,0120	0.0006	106.17	Option 2: A=6.975; B=1424.255, C=213.21
Hexans (-n)						2,4880	N/A	N/A	86.1700	0.0130	0.0109	86.17	Option 2: A=5.876, B=1171.17, C=224.41
Isopropyl benzene		•				0.0748	N/A	₩A.	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.79
Methyl stochol						1,9820	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthatene						0.0025	N/A	N/A	128.1600	0.0030	0.0000	125.15	Option 2: A=6.8181, B=1585.86, C=184.32
Stytene						0.1023	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.08
Toluene						0.4520	N/A	N/A	92,1300	0.0600	0.0091	92.13	Option 2: A=6.854, B=1344.8, C=219.48
Undentified Components						4.3817	N/A	NVA.	67,2114	0.7529	0.9551	77.89	
Xylenes (Mixed)						0.1258	N/A	N/A	106,1700	0.0700	0.0030	106.17	Option 2: A=7.009, B=1452.268, C=215.11
Equilion Gasoline RVP 5.99	Jul.	72,25	63.02	61,48	61,57	3.7570	N/A	N/A	68.0000			\$2.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbonzone						0.0329	N/A	N/A	120.1900	0.0240	0.0008	120.16	Option 2: A=7.04383, B+1573.267, C=208.56
2,2.4 Trincingpercane						0.6396	N/A	N/A	114,2300	0.0470	0.0127	114.23	Option 2: A=6.5118, B=1257.84, C=220.74
Benzene						1.6250	N/A	N/A	78.1100	0.0120	0.0063	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.6725	N/A	N/A	64.1600	0.0024	0.0013	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylosnzene						0.1642	N/A	N/A	106,1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.6088	N/A	N/A	88.1700	0.0130	0.0110	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0796	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						2.0992	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.E97, B=1474.08, C=229.13
Naphthalene						0.0027	N/A	N/A	128,1600	0.0030	0.0000	128.18	Option 2: A=6.8161, B=1585.86, C=104.32
Styrane						0.1091	N/A	N/A	104,1500	0.0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene						0.4784	N/A	N/A	92,1300	0.0600	0.0093	62.13	Option 2: A=6.954, B= 1344.8, C=219.48
Unidentified Components						4,5501	N/A	NA	67.1090	8,7520	0.9544	77.89	Auf 0.4 7000 B-1100 000 C. 017 11
Xylenes (Mood)						0.1373	N'A	NVA	108.1700	0.0700	0.0031	106.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasoline RVP 5.99	Aug	71.45	62.84	60.06	61.57	3.6975	N/A	N/A	68.0000			62.50	Option 4; RVP-5.99, ASTM 6bpe-3
1,2,4-Trimethyibenzene						0.0318	N/A	N/A	120.1900	0.0248	0.0003	120,19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0.8214	N/A	N/A	114.2300	0.0478	0.0127	114,23 78,11	Option 2: A=6.8118, B=1257.84, C=220.74 Option 2: A=6.905, B=1211.033, C=220.78
Benzene						1.5918	N/A	N/A	78.1100	0.0120	0.0063	/0.11	Upicii C. 190.000, 041211403, 04220.10

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Cyclohexane						1.6386	N/A	N/A	84.1600	0.0024	0.0013	64.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethyloenzena						0.1599	N¥A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Heiane (-n)						2.5579	N/A	N/A	66.1700	0.0130	0.0109	28.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzane						0.0776	NVA .	N/A	120.2000	9.0015	0.0000	120.20	Option 2: A=6.953, 8=1450.793, C=207.78
Methyl alcohol						2.0494	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=147#.08, C=229.13
Nophthalene						0.0026	N'A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8191, B=1585.88, C=184.32
Styrone						0.1062	NVA	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.4572	NVA.	N/A	82.1300	0.0600	0.0092	\$2.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4,4790	N/A	N/A	67.2042	0.7529	0.9547	77.89	
Xylenes (Mored)						0.1337	N'A	N/A	106,1700	0.0700	0.0031	108.17	Option 2: A=7.009, B=1452.268, C=215.11
Equiton Gasoine RVP 5.99	Sep	69.03	61.28	76.77	61.57	3.5226	N'A	N/A	68.0000			62.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethybenzene						0.0291	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2; A=7.04383, B=1573.267, C=208.58
2,2,4-Tranet tylpentene						0.7685	N/A	N/A	114,2300	9.0470	0.0124	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Benzene						1.4923	N/A	NVA	78,1100	0.0120	0.0052	78,11	Option 2: A=6.905, B=1211.033, C-220.79
Cyclohexane						1.5392	N/A	NVA	84.1600	0.0024	0.0013	84.15	Option 2: A=6.841, B=1201.53, C=222.65
Edyberzere						0.1476	N/A	NA	166.1700	0.0120	9.0006	106,17	Option 2: A=6.975, B=1424.255, C=213.21
Hexano (-n)						2.4063	N/A	ŇA	66.1700	0.0130	0.0108	65.17	Option 2: A=6.876, B=1171.17, C=224.41
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isopropyl benzene						0.0712	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.9054	NVA	N/A	32.0400	9.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0023	N/A	N/A	128.1600	0.0030	0.0000	128.15	Option 2: A=6.8181; B=1585.86, C=184.32
Styrene						0.0976	N/A	N/A	104.1500	0.0000	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						9.4347	NVA	N/A	92.1300	0.0600	0.0090	92,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4.2698	N/A	N/A	67,2197	0.7529	0.9555	77.89	
Xylenes (Mixed)						0,1233	N/A	N/A	106.1700	0.6700	0.0030	106.17	Option 2: A=7.009, B=1482.258, C=215.11
Equilor Gascine RVP 5.89	Oct	64.64	58.13	71.16	61.57	3,2234	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzane						0.0246	N/A	N'A	120.1900	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentzne						0.6800	·N/A	N'A	114.2300	0.0470	0.0120	114.23	Option 2: A=6.8119, B=1257.54, C=220.74
Benzena						1.3268	NVA.	NVA.	78.1100	9.0120	0.0060	78.11	Option 2: A=6.805, B=1211.033, C=220.79
Cyclohekane						1.3720	N/A	N/A	64,1600	0.0024	0.0012	64.16	Option 2: A=6.841, B= 1201.53, C=222.65
Ethyloenzena						0.1274	N/A	N/A	106.1700	0.0120	0.0006	106.17	Ontion 2: A=6.975. B= 1424.255, C=213.21
Hexana (-n)						2,1564	N/A	N/A	86,1700	0.0130	0.0106	28,17	Option 2: A=6.876, B=1171,17, C=224.41
Isopropyi benzene						0.0507	N'A	N/A	120,2000	9.0015	0.0000	120.20	Option 2: Au6 963, 8-1460,793, C=207.78
Methyl alcohol						1.6668	N/A	N/A	32.0400	9,0014	9.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Nachinalene						0.0019	N/A	N/A	128.1600	0.0030	9.0000	128.16	Option 2: A=6.8161, B=1585.86, C=184.32
Styrene						0.0844	N'A	N/A	104.1500	0.0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09
Tokiene				٩		0.3809	NVA	NVA	92.1300	0.0600	0.0086	92.13	Option 2: A=6.954, B=1344.8, C=219.48
						3.9117	NVA	N/A	67.2475	9,7529	. 0.9570	17.89	
Unidentified Components				•			N/A	N/A	106.1700	0.0700	0.0028	156.17	Option 2; A=7.009, B=1462.266, C=215.11
Xylenss (Mixed)						0.1052				00100	01026	82.50	Option 4: RVP-12.5, ASTM Slope-3
Equilon Gasoline RVP 12.5	Nov	58.87	54.21	ଷ.ସ	61.57	6.5099	N'A	N/A	63.0000				
1,2,4-Trimethylbenzene						0.0195	N'A	N/A	120.1900	9.0240	0.0001	120.16	Option 2: A=7.04383, B=1573.287, C=208.56
2,2,4-Trimethylpentane						9.5765	N'A	N/A	114.2300	0.0470	0.0065	114.23	Option 2: A=6.8118, B=1257.84, C=220,74
Benzene						1.1317	N/A	N/A	78.1100	9.0120	9.0027	79.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.1748	N/A	N/A	84,1600	0.0024	9.0006	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						9.1043	₩A	NVA.	106.1700	0.0120	9.0003	106,17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.6578	NVA.	. N∕A	65.1700	0.0130	0.0049	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						9,9490	N'A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.3915	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0014	N/A	N/A	128.1600	9.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.68, C=184.32
Stytene						0.0690	NVA .	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.3187	N/A	N/A	82.1300	6.0600	0.0038	92.13	Option 2: A=6.954, B=1344.0, C=219.49
Unidentified Components						8.0529	N/A	N/A	62.6222	0.7529	0.9806	77.89	
Xylenes (Mixed)					•	0.0858	N/A	N/A	106,1700	9.0700	0.0012	106.17	Option 2: A=7.009, B=1462.256, C=215.11
Equilon Gasoline RVP 14.0	Dec	54.98	51.51	58.44	61.57	6.8705	N/A	N/A	91,0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2 a-Trimethylbenzene						0.0167	N'A	N/A	120.1900	6.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2.4 TrimeOn/pentane						0.5145	N/A	N/A	114.2300	0.0470	0.0048	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0143	N/A	N/A	78.1100	9.0120	0.0024	78.11	Option 2: A=6,805, B=1211.033, C=220.78
Cyclohecane						1.0556	N/A	N/A	84.1600	0.0024	9.0005	84.18	Option 2: A=6.841, B=1201.53, C=222.65
Ethybonzene						0.0909	N/A	N/A	106.1700	0.0120	0.0002	108.17	Option 2: A=6.975, B=1424.255, C=213.21
Hazare (-n)						1.6765	N'A	N/A	85.1700	0.0130	0.0043	85.17	Option 2: A=6.876, B=1171.17, C=224.41
isopropyi benzene						0.0423	N'A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, 8=1450.793, C=207.78
Methyl stochol						1.2289	N/A	N/A	32.0400	0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.06, C=229.13

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Nephthalene	0.0011	N'A	N/A	128,1600	6.0030	0.0000	125.16	Option 2: A=6.8181, B=1585.86, C=184.32
Shirene	0.0601	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene	0.2816	N/A	NĽA	92.1300	0.0600	0.0033	\$2,13	Option 2: A=5.954, B=1344.8, C=219.48
Unidentified Components	8.5170	N/A	N/A	60.6584	6.7529	0.9830	17.89	
Xylenes (Mbred)	0.0756	N/A	N/A	106.1700	0.0700	0.0016	105.17	Option 2: A=7.009, B=1452.266, C=215.11

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

Stockton Tank 19 pre-project ann throughput - Internal Floating Roof Tank Stockton, California

Month:	January	February	March	Apr1	May	June	July	August	September	October	November	Decembe
Rim Seal Losses (b):	22.8900	21.4210	22.5801	24.5143	10.6594	11.4851	12.0037	11.7838	11.1445	10.0731	21,9190	22.830
Sezi Factor A (D-mole/1-yr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.600
Seal Factor B (to-mole/th yr (mph)*n);	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	9.4000	0.4000	0.400
Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid	0.1564	0.1417	0.1500	9.1621	0.0853	0.9704		0.0722	0.0683	0.0617	0.1450	0.155
Surface Temperature (psia):	6.8838	6.3968	6.6772	7.0673	3.3880	3.8161		36975	3.5226	3,2234	6.5099	6.870
Tank Diameter (it):	48.0000	48.0000	48,0000	48.0000	48.0000	48.0000		48.0000	48.0000	48.0000	48.0000	48.000
Vepor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	63.0000	63.0000	68.0000	68.0000		66.0000	68.0000	68.0000	63.0000	61.000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	\$.0000.8	1.0000	1.0000	1.0000	1.0000	1.000
Nithdrawal Losses (b):	5.0138	5.0138	5.0138	5.0138	5.0138			5.0138	5.0138	5.0138	5.0138	5.013
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000		1.0000	1.000
Effective Column Diameter (fi):	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000	1.0000	1.000
Net Throughout (gz/mo.):				1,250,000.0000 1,						1,250,000.0000		
Shell Clingage Factor (bbl/1000 soft):	0.0015	0.0015	0.0015	0.0015	0.0015			0.0015	0.0015		0.0015	
Average Organic Liquid Density (b/gal):	5.6000	5.6000	5.6000	5.6000	5.6000			5.6000	5.6000		5.6000	
Tank Diameter (It):	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48.0000	48,0003	48.0000	48.0000	48.0000	48.000
Deck Filling Losses (Ib);	239.8678	224.4744	237.6688	256,8899	111.7012			1214843	118.7850		229.6927	239.242
Value of Vapor Pressure Function;	0.1584	0.1417	0.1500	0.1621	0.0653			0.0722	0.0683		0.1450	
Vapor Molecular Weight (Ibrib-mole):	61,0000	63.0000	63.0000	63.0000	68L0000			68,0000	68.0000		63.0000	
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000		1.0000	
ToL Roof Fizing Loss Fact.(ib-mole/yr):	301,8000	301.8000	301.8000	301_8000	301.8000	301,8000	301.8000	301.5000	301.8000	301,8000	301.8000	301,800
Deck Scam Losses (Ib):		0.0000	0,0000	0.0000	0.0000				0.0000			
Deck Seam Length (#):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000
Deck Seam Lose per Unit Length												
Factor (to-molefil-yr):	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000			
Deck Seam Length Fector(f/soft):	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000			
Tank Diameter (ff):	48.0000	48.0000	48.0000		48.0000			48,0000	48.0000		48.0000	
Vapor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	63.0000		68.0000				68.0000			
Produci Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total Losses (Ib):	267.7716	250.9082	265.3627	288.4180	127.3743	138,8535	142.6060	140,2819	132,9433	120.6441	256.6254	257,081
			-	-			Roof Fitting Loss	Factors				
Roof Fibing/Status				Quant	y I	(Fa(to-mole/yr)	KFb(tb-mole/ty			ត	Losses(b)	
Access Heich (24-In, Diam.)/Unbolted Cover, Ungag	tand					38.00		5,80		1.20	253.6522	
Automatic Gauge Ficel Well/Unbolted Cover, Unges					1	14.00		5.40		1.10	98.6425	
Column Woll (24-in. Diam.)/Buth-Up ColSilding Cov					:	47.00		0.00		0.00	331.1571	
Ledder Well (36-in. Diam.)/Sliding Cover, Ungeskete					:	76.00		0.00		0.00	535.4880	
Roof Log of Hanger Well/Adjustable	~					7_90		0.00		0.00	779.2750	
Sample Pipe or Well (24-in, Diam.)/SII Fabric Seci 1	IEL Conto			•	-	12.00		0.00		0.00	84.5507	

TANKS 4.0.9d

Emissions Report - Detall Format

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Individual Tank Emission Totals

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

Stockton Tank 19 pre-project ann throughput - Internal Floating Roof Tank Stockton, California

			Losses(lbs)		
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Equilon Gasoline RVP 5.99	67.15	30.08	703.67	0.00	800.90
1,2,4-Trimethylbenzene	0.02	0.72	0.17	0.00	0.91
2.2,4-Trimethylpentane	0.84}	1.41	8.77	0.00	11.02
Benzene	0.41)	0.36	4.35	0.00	5.12
Cyclohexane	(60.0	0.07	0.90	0.00	1.05
Ethylbenzene	0.04	0.36	0.43	0.00)	0.83
Hexane (-n)	0.72	0.39	7.60	0.00	8.71
lsopropyl benzene	0.00	0.05	0.03	0.00	0.07
Methyl alcohol	0.06	0.04	0.65	0.00	0.75
Naphthalene	0.00	0.09	0.00	0.00	0.09
Styrene	0.00	0.02	0.02	0.00	0.04
Toluene	0.60	1.90	6.34	0.00	8.75
Unidentified Components	64.16	22.65	672.32	0.00	759.13
Xylenes (Mixed)	0.20	2.11	2.10	0.00	4.41
Equilon Gasoline RVP 12,5	90.53	20.06	948.73	0.00	1,059.32
1,2,4-Trimethylbenzene	0.01	0.48	0.09	0.00	0.58
2,2,4-Trimethylpentane	0.50	0.94	5.24	0.00	6.68
Benzene	0.25	0.24	2.62	0.00	3.11
Cyclohexane	0.05	0.05	0.54	0.00	0.84
Elhylbenzene	0.02	0.24	0.24	0.00	0.51
Hexane (-n)	0.44	0.26	4.65	0.00	5.36
Isopropyl benzene	0.00	0.03	. 0.01	0.00	0.05
Methyl alcohol	0.04	0.03	0.38	0.00	0.44
Naphthalene	0.00	0.06	0.00	0.00	0.06
Styrene	0.00	0.02	0.01	0.00	
Toluene	0.35	1.20	3.71	0.00	5.27
Unidentified Components	68.75	15.10	930.03	0.00	1,033.68

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Xylenes (Mixed)	0.11	1.40	1.19	0.00	2.70
Equilon Gasoline RVP 14.0	45.72	10.03	479.11	0.00	534.86
1;2,4-Trimethylbenzene	0.00	0.24	.0.04	0.00	0.28
2,2,4-Trimethylpentane	0.22	0.47	2.28	0.00	2.97
Benzene	0.11	0.12	1.15	0.00	1.38
Cyclohexane	0.02	0.02	0.24	0.00	0.29
Ethylbenzene	0.01	0.12	0.10	0.00	0.23
Hexane (-n)	0.20	0.13	2.06	0.00	2.38
Isopropyl benzene	0.00	0.02	0.01	0.00	0.02
Methyl alcohol	0.02	0.01	0.16	0.00	0.19
Naphthalene	0.0	0.03	0.00	0.00	0.03
Styrena	0.00	0.01	0.00	0.00	0.01
Toluene	0.15	0.60	1.60	0.00	2.35
Unidentified Components	44.94	7.55	470.97	. 0.00	523.47
Xylenes (Mixed)	0.05	0.70	0.50	0.00	1.25

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N-758-14 (Pre and Post-Project) Tanks 4.0.9d Emissions Reports

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N-758-14

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

Identification	
User Identification:	Stockton Tank 18 annual
City:	Stockton
State:	California
Сотралу:	Shell Oil Products US
Type of Tank:	External Floating Roof Tank
Description:	Throughput = 50,952,827 gal/yr
Tank Dimensions	
Diameter (ft):	60.00
Volume (gallons):	689,136,00
Turnovers:	73.94
Paint Characteristics	
Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Characteristics	
Type:	Pontoon
Fitting Category	Detail
Tank Construction and Rim-Seal Syst	tem
Construction:	Welded
Primary Seal:	Liquid-mounted
Secondary Seal	Weather Shield

Deck Fitting/Statue

Quantity

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Access Hatch (24-in. Diam.)/Botted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Roof Leg (3-In. Dlametor)/Adjustable, Center Area, Ungasketed	7
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Ungasketed	9
Vacuum Breaker (10-in. Diam.)Weighted Mech. Actuation, Gask.	ī
Slotted Guide-Pole/Sample Well/Gask, Sliding Cover, w, Float, Wiper	1
Gauge-Hatch/Sample Well (8-in, Diam.)/Weighted Mech. Actuation, Ungask.	1

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d

Emissions Report - Detail Format

وإجلام المحجبة ومحتاص فجا وإعجا وبالمعادات التوعي دفاديا الدها

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Liquid Contents of Storage Tank

Stockton Tank 18 annual - External Floating Roof Tank Stockton, California

			elly Liquid S		Liquid Bulk				Vapor	Liquid	Vapor		0
Kinture/Component	Month		perature (d Min.	eg F) Max.	Temp (deg F)	Vapo Avg.	Min.	(psia) Maz.	Mal. Weight	Mass Fract	Mass Fract,	Mol. V/eight	Basis for Vepor Pressure Calculations
Guilon Gesaine RVP 14.0		55.08	51,49	50.67	61.57	6.8836	N/A	N/A	51.0000	<u>.</u>	•	12.50	Oction 4: RVP+14, ASTM Slope=3
12.4-Trimeinyiberzene			••	•••••		0.0157	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7,04383, B=1573,267, C=208.56
2.2.4-Trimetrylpentane						0.5161	NA	N/A	114,2300	0.0470	0.0048	114.23	Option 2: A=6.8119, B=1257.84, C=220.74
Benzena						1.0172	N/A	NVA	78.1100	0.0120	0.0024	70.11	Option 2: A=6.905, 8=1211.033, C=220.79
Cyclohexane						1.0585	N/A	N/A	84,1600	0.0024	9.0005	64.16	Option 2: A=6.641, B=1201.53, C=222.65
Ehytenzere						9.0913	N/A	N/A	106.1700	0.0120	0.0002	105.17	Ontion 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.6810	N/A	N/A	86.1700	9.9130	9.0043	86.17	Option 2: A=6.576, B=1171,17, C=224.41
Isopropyi benzene						9.0424	N/A	N/A	120,2000	0.0015	9,0000	120.20	Option 2: A=6.963, 8=1460.793, C=207.78
Methyl sloohol						1.2329	N/A	N/A	32,0400	0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naolihalene						0.0011	N/A	N/A	128,1600	0.0030	0.0000	128.18	Option 2: A=6.6161, B=1585.86, C=184.32
Styrene						9.0603	NA	NA	104,1500	0.0008	9.0000	104.15	Option 2: A=7,14, B+1574.51, C=224.09
Toluene						0.2827	N/A	N/A	92,1300	0.0600	9.0033	82,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						6.5331	N/A	N/A	60.6580	0.7529	9,9830	77.89	
Xylenes (Mized)						0.0759	N'A	N/A	106.1700	0.0700	0.0019	108_17	Option 2: A=7.009, B=1452,266, C=215.11
gulon Gasoline RVP 14.0	Feb	57.96	53.17	62.75	61.57	7.2649	N/A	N/A	61,0000			82.50	Option 4: RVP=14, ASTU Slope=3
1,2,4-Trimethylbenzene		41.24			••==	0.0188	N/A	N/A	120,1900	0.0240	9,0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylaentane						0.5615	N/A	N/A	114.2300	0,0476	0.0049	114.23	Option 2: A=6.5118, B=1257.64, C=220.74
Banzena						1,1033	N/A	N/A	78.1100	0.0120	9.0025	78.11	Oction 2: A=6.905, B=1211.033, C=220.79
Cyclohe.czne						1.1459	N/A	NA	84.1600	0.0024	0.0005	84.18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						9,1010	N/A	N/A	106.1700	0.0120	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.0140	N/A	N/A	85.1700	9.0130	0.0044	65.17	Oction 2: A=6.676, B=1171, 17, C=224.41
Isopropyl benzene						0.0473	N/A	N/A	120,2000	0.0015	0.0000	120.20	Oction 2: A=6.963, 8=1460.793, C=207.78
Methyl exchol						1.3516	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897; B=1474.08, C=229.13
Nachthalene						9.0013	N/A	N/A	128.1000	0.0030	0.0000	128.16	Option 2: A=6.8191, B=1585.86, C=184.32
Styrene						0.0568	N/A	N/A	104.1500	0.0006	0.0000	104.15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene						9.3097	N/A	N/A	92,1300	9.0520	0.0035	92.13	Option 2: A=6.954, B=1344.8, C=219.46
Unidentified Components						9.0025	N/A	N/A	88.6471	0.7529	0.9625	77.89	
Kylenes (Mized)						0.0841	N/A	N/A	106.1700	0.0700	9.0011	106.17	Option 2: A=7.009, B=1462.266, C=215.11
ayienes (4440) ayien Gasoline RVP 14.0	Mar	60.22	54.36	65.07	61.57	7.5756	N/A	N/A	61,0000	0.0700	0.0011	82.50	Octon 4: RVP=14, ASTM Slope=3
1,2,4-TrimeChylbenzene	Mar	90.22	24-30	00.07	61.27	6.0206	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpertane						0.5394	N/A	N/A	114,2300	0.0470	0.0050	114.23	Option 2; A=6.6118, B=1257.84, C=220.74
Benzena '						1.1749	N/A	N/A	76,1100	0.0120	9.0025	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cvclohezana						1.2188	N/A	N/A	84.1600	0.0024	0.0005	84.18	Option 2: A=6.841, 8=1201.53, C=222.65
Ethybergene						0.1094	N/A	N/A	106.1700	9.0120	6.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
confisional anna Mancenne (-n)						1.9242	N/A	N'A	85.1700	9.0120	0.0045	B6.17	Option 2: A=6.875, B=1171.17, C=224.41
ranzine (-n) Istriaciji benzene						9.0515	N/A	N/A	120,2000	0.0015	0.0000	120,20	Option 2: A=6,963, B=1460.793, C=207.78
Methyl siconal						1.4520	NVA	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=228.13
Nachthalena						0.0015	N/A	N/A	128.1900	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrane						0.0015	N/A	N/A	104,1500	9.0008	0.0000	104.15	Oction 2: A=7.14, B=1574.51, C=224.09
Toluene						0.5324	N/A	N/A	92,1300	0.0600	0.0036	92.13	Option 2: A=6.954, B=1344.B, C=219.48
Unidentified Components						9.3849	N/A	N/A	60,6383	0.7529	0.9621	77.89	
Uragenaties Components Xylenes (Mized)						0.0911	N/A	N/A	106.1700	0.9700	0.0011	106,17	Option 2: A=7.009, B=1452.266, C=215.11
Aylenes (1920-0) Equiton Gasoline RVP 14.0	Acr	63.25	55.98	70.54	51.57	8.0167	N'A	N/A	61.0000			62.50	Option 4: RVP=14, ASTM Slope=3
124 Trimestylbenzene	~	03.60	04, LA	10.34	01.4	0.0233	N/A	N/A	120,1900	0.0240	0.0001	120.19	Ontion 2: A=7.04383, B=1573.257, C=208.56
2,2,4-Trimethylpentane						0.6539	N/A	N/A	114,2300	0.0470	0.0052	114.23	Option 2: A=6.8118, B=1257.84, C=220.74

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Banzene						1.2775	N/A	N/A	78,1100	0.0120	0.0026	76.11	Option 2: A=5.905, B=1211.033, C=220.79
Cyclohexane						1.3224	N/A	N/A	84,1600	0.0024	0.0005	84.16	Option 2: A=6.641, B=1201.53, C=222.65
Ethylbenzene						0.1215	N/A	N/A	108.1700	0.0120	0.0002	106.17	Option 2: A=8.975, 8=1424.255, C=213.21
Hauane (-n)						2.0815	N/A	N/A	86,1700	0.0130	0.0046	86.17	Option 2: A=8.876, B=1171.17, C=224.41
tsopropyi benzene						0.0577	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=8.963, B=1460.793, C=207.78
Methyl aloshol						1.5969	N/A	N/A	32.0400	0.0014	0.0004	32.04	Oction 2: A=7,897, B=1474.08, C=229.13
Naphthelene						0.0017	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.6181; B=1585.86; C=184.32
Styrene						0.0804	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.3651	N/A	N/A	92.1300	0.0600	0.0037	92.13	Option 2; A=8.954, B=1344.8, C=218.48
Unidentified Components						9.9200	N/A	N/A	60.6264	0.7529	0,9815	77.89	•
Xylenes (Mixed)						0.1013	N¥A.	N/A	106,1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilon Gasoline RVP 14,0	May	67,10	58.83	75.36	61.57	8.5869	N/A	N/A	81.0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimetrylaenzene						0.0270	N/A	N/A	120.1900	0.0240	6.0001	120,19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimetrytoentane						0.7284	N/A	N/A	114,2300	0.0470	0.0054	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.4173	N/A	N/A	76,1100	0.0120	0.0027	76.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.4635	N/A	N/A	84,1600	0.0024	0.0006	84,16	Oction 2: A=6.641, 8=1201_53, C=222.65
Ethylbenzene						0.1354	N/A	N/A	108.1700	0.0128	0.0003	106.17	Oction 2: A=8.975, 8-1424,255, C=213.21
Hexane (-n)						2.2945	N/A	N/A	86, 1700	0.0130	0.0047	85.17	Option 2: A=6.876. B=1171.17. C=224.41
Isopropyl benzene						0.0684	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6,963, B=1460,793, C=267,78
Methyl alcohol						1,7968	N/A	NA	32,0400	0.0014	0.0004	32.04	Option 2: A=7,697, B=1474.08, C=229.13
Naphchalene						0.0021	NA	N/Å	123,1600	0.0030	0.0000	123.18	Option 2: A=6.6161, 8=1585.86, C=184.32
Styrene						0.0917	N/A	N/A	104,1500	9.0009	0.0000	104.15	Option 2: A+7, 14, B= 1574.51, C=224.09
Toluene						0.4103	NA	N/A	92,1300	0.0600	0,0039	\$2,13	Option 2: A=6.954, B=1344.5, C=219.45
Unidentified Components						10.6281	N/A	N/A	60.6111	0.7529	0.9807	77,89	
Xylenes (LUxed)						0.1155	N/A	NA	106.1700	0.0700	0.0013	108,17	Option 2: A=7.009, 8=1462.266, C=215.11
Equilion Gasofine RVP 14.0	Jun	70.33	51.45	79.22	61.57	9.0984	N/A	N/A	61,0000			82.50	Option 4: RVP=14, ASTM Slope=3
1.2.4-Trimethyberzene						0.0305	N/A	NA	120,1600	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2.2.4 TrimeTrylpentane						0.7957	N/A	N/A	114,2300	0.0470	0.0056	114.23	Oction 2: A=6.8118, B=1257.84, C=220.74
Benzene						1,5449	N/A	N'A	78,1100	0.0120	0.0028	78.11	Option 2: A=6.905, 8= 1211.033, C=220.78
Cyclohexane						1.5922	N/A	N/A	84.1600	0.0024	0.0006	64,16	Option 2: A=6.841, B=1201.53, C=222.65
Einythenzane						0.1542	N/A	NA	106.1700	0.0120	0.0003	108.17	Option 2: A=6.975, B=1424.255, C=213.21
Hezane (-n)						2,4850	N/A	N'A	85.1700	0.0130	0.0048	66,17	Option 2: A=8.876, B=1171,17, C=224,41
isopropyi benzene						0.0746	NA	N/A	120,2000	0.0015	0.0000	120,20	Option 2: A=8.963, B=1450.753, C=207.78
Methyl alcohol						1,9820	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, 8=1474.08, C=229.13
Nephthalene						0.0025	NA	N'A	128,1600	0.0030	0.0000	128,16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.1023	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tolugne						0.4520	N/A	N/A	92,1300	0.0600	0.0040	92.13	Option 2: A=8.954, B=1344.B, C=219.45
Unidentified Components						11,2564	N/A	N/A	60,5980	0.7529	0.9801	77.89	
Xvianes (Mized)						0.1288	N/A	N/A	106.1700	0.0700	0.0013	106.17	Option 2; A=7.009, 8=1462.268, C=215.11
Equilon Gasoline RVP 14.0	Jul	72.25	63.02	81.48	61.57	0.4125	N/A	N/A	61.0000	•	0.001	82.58	Option 4; RVP=14, ASTM Slope=3
1.2.4 Trimethylashzene						0.0329	N/A	NVA.	128,1900	0.0240	0.0001	120.19	Option 2: A=7,04383, B=1573,257, C=208.56
2.2,4-Trimethyloentane						0.8396	N/A	N/A	114,2300	0.0470	0.0057	114.23	Option 2; A=6.6118, B=1257.84, C=220.74
Benzono						1,6250	NA	N/A	78,1100	0.0128	0.0028	78,11	Option 2: A=8,905, B=1211.033, C=220.79
Cyclohesane						1.6728	NA	N/A	84,1600	0,0024	0.0006	64.18	Option 2: A=6.841, B=1201,53, C=222,65
Ethylbenzene						0.1642	N/A	NVA	106.1700	0.8120	0.0003	105.17	Option 2: A=6.975, B=1424,255, C=213.21
Hezana (-n)						2,6088	N/A	N'A	85.1700	0.0130	0.0049	69.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyl benzene						0.0798	N/A	N/A	128,2000	0.0015	0.0000	120.20	Option 2: A=0.963, B=1450,783, C=207,78
Methyl alcohol						2.0992	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A= 7,897, B=1474.08, C=229,13
Nephtialene						0.0027	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.66, C=184.32
Styrane						0.1091	N/A	N/A	104,1500	0.0005	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						8,4784	N/A	N/A	92,1300	0.0600	0.0041	92.13	Option 2: A=6.954, B=1344, B, C=219.48
Unidentified Components						11.8423	N/A	NA	60.5901	0.7529	0.9797	77.89	· · · · · · · · · · · · · · · · · · ·
Xylenes (Mixed)						9.1373	NA	NA	106.1700	0.0700	0.0014	106,17	Option 2: A=7.009, B=1462.268, C=215.11
Equion Gasoline RVP 14.0	Aug	71.45	62.84	80.06	61.57	9,2801	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trime@ytbonzene	-					0.0319	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, 8=1573.267, C=208.55
2,2,4-7 meetry partane						9.6214	N/A	N/A	114.2300	0.0470	0.0056	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Bonzena						1.5910	NA	N/A	76.1100	0.0120	0.0028	78.11	Option 2: A=6.905, B=1211.033, C=220.78
Cyclohexane						1.6388	N/A	N/A	84.1900	0.0024	0.0006	84.16	Option 2: A=8.841, 8=1201.53, C=222.65
Ethylbenzene						0.1599	N/A	NVA.	106.1700	0.0120	0.0003	108.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-r)						2,5576	N/A	N/A	86,1700	0.0130	0.0048	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropy! Denzene						0.0776	N/A	N/A	120.2000	6.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78

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Methyl alcohol						2.0494	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2; A=7.897, B=1474.08, C=229.13
Napithalene Styrene						0.0026	N/A	NA	128.1600	0.0030	0.0000	128.16	Option 2: A=6.0181, B=1565.86, C=184.32
Toluene						0.1062	N/A	N/A	104.1500	0.0005	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
						0.4672	N/A	N'A	92,1300	0.0600	0.0041	92.13	Option 2; A=6.954, B=1344.8, C=219.48
Unidentified Components Xylenes (Mixed)						11.4795	N/A	NIA	60.5934	0,7529	0.9799	77,89	
Equilon Gasoline RVP 14.0	B	~~~				0.1337	N/A	N/A	106.1760	0.0700	0.0014	105.17	Option 2; A=7.009, B=1452.268, C=215.11
1,2,4-Trimethylbonzene	Sep	69.03	61.28	76,77	61,57	8.8891	N/A	N/A	61,0000			82.50	Option 4: RVP=14, ASTM Slope=3
2,2,4-Trimethylpentene						0.0291	N/A	N'A	120.1800	0.0240	6.0001	120.19	Option 2: A=7.84393, B=1573.287, C=208.56
2,2,4~1 menyipencene Benzone						6.7685	N/A	N/A	114,2300	0.8470	0.0055	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Cyclohexane						1,4923	N/A	N/A	78,1100	0.0120	0.0027	78.11	Option 2: A=6.905, B=1211,033, C=220,79
						1.5392	N/A	N/A	84.1600	0.0024	0.0006	64.16	Option 2: A=6.841, 8=1201.53, C=222.65
Estylbenzane						6,1478	N/A	NľA	106.1700	0.0120	0.0003	108.17	Option 2: A=6.975, B=1424.255, C=213.21
Herane (-n) Isopropyl benzene						2.4083	N/A	N/A	86.1700	0.0130	0.0048	88,17	Option 2: A=5.876, B=1171.17, C=224.41
						0.0712	N/A	N/A	120.2000	0.0015	0.0000.0	120.20	Option 2: A=6.963, B=1460,793, C=207.78
Methyl sloohol						1,9054	N/A	N/A	32.0400	0.0014	0.0004	32,84	Option 2: A=7.697, 8=1474.08, C=229.13
Naphthalene						0.0023	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8161, B=1585.86, C=184.32
Styrena						0.0979	N/A	N/A	104,1500	0.0006	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						D.4347	N/A	N/A	92_1300	6.0600	0.0040	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						18.9994	N/A	N/A	60,6033	0.7529	6.9804	77,£9	
Xylenes (Mixed)	_					0.1233	N/A	NYA	106,1700	0.0700	0.0013	106,17	Option 2: A=7.009, B=1462.266, Ce215.11
Equilon Gasoline RVP 14.0	Oa	64.64	58.13	71.16	61.57	8.2151	N/A	N/A	61,0000			62.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimestybenzene						6.0246	N/A	NYA	120.1900	6.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4 Trimethylpentane						0.6800	N/A	N'A	114,2300	D.0470	0.0053	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1_3266	N/A	N/A	78,1100	6.6120	0.0025	76,11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohezane						1.3720	N/A	N/A	84,1600	0.0024	0.0005	84,18	Option 2: A=6.641, B=1201.53, C=222.65
Ethylbenzone						0.1274	N/A	N/A	106,1700	0.6120	0.0003	106.17	Option 2: A=8.975, B=1424.255, C=213.21
Hezana (-n)						2,1564	N/A	N/A	86.1700	0.0130	6.0045	86.17	Option 2: A=6.676, B=1171.17, C=224.41
Isopropy! benzena						0.0607	N/A	N/A	120.2060	6.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl alcohol						1.6668	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Napithalene						0.0019	N/A	N/A	128.1600	0.0030	6.0000	128.16	Option 2: A=6.8181, B=1585.66, C=184.32
Styrene						6.0644	N'A	N/A	104.1500	0.0005	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tolusne						6.3809	N'A	1J/A	82,1390	0.0600	0.0038	92,13	Option 2: A=6.954, B=1344.8, C=219.43
Unidentified Components						16.1713	N'A	t¥A	60.6209	0.7529	0,9812	77,89	
Xylenes (Mixed)						0.1062	N/A	N/A	106.1700	6.0700	0.0012	105.17	Option 2: A=7.009, B=1452.265, C=215.11
Equilon Gasoline RVP 14.0	Nov	58.87	54.21	S.S	61.57	7.3890	N/A	N/A	61.0000			82.50	Option 4: RVP =14, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0195	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpontane						0.5765	N/A	N/A	114,2300	0.0470	0.0050	114.23	Option 2; A=6.6116, B=1257.84, C=220.74
Benzane						1.1317	N/A	N¥A	78,1100	0.6120	6,0025	78.11	Option 2: A=6.905, B=1211,033, C=220.79
Cyclohexane						1.1749	N/A	N/A	84,1600	6.0024	6.0005	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1043	N/A	N/A	106.1700	6.0120	0.0002	106.17	Option 2: A=5.975, 8=1424.255, C=213.21
Hexane (-n)						1.8578	N/A	N/A	85.1700	0.6130	0.0044	86,17	Option 2: A=6.676, B=1171, 17, C=224,41
lsopropyi benzene						6.0490	N/A	NYA	120.2000	0.0015	6.0006	120.20	Option 2: A=6.963, 9=1460.793, C=207.78
Methyl alcohol						1.3915	N/A	N/A	32,0400	0.0014	0.0004	32.84	Option 2: A=7.897, B=1474.08, C=229.13
Naphshalene						0.0014	N/A	N/A	128,1600	0.0030	6.0000	128.18	Option 2: A=8.8181, B=1585.86, C=184.32
Styrene						0.0690	N/A	N∛A	184.1500	6.0005	0.0000	104.15	Option 2: A=7.14, B=1674.51, C=224.09
Toluene						0.3167	N/A	N/A	92.1300	0.0600	0.0035	82.13	Option 2: A=5.954, B=1344.8, C=219.46
Unidentified Components						9.1552	N'A	N/A	60.6436	0.7529	0.9823	77,69	
Xylenas (Mirad)						6.0668	N'A	N/A	106.1700	6.0700	0.0011	106.17	Option 2: A=7.009, 8=1462.268, C=215.11
Equilon Gasoline RVP 14.0	Dec	54.98	51.51	58.44	61.57	6.8705	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimethybenzene						0.0167	N/A	N/A	120.1900	0.0240	6.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane						0.5145	N/A	N/A	114,2300	0.0470	6100.0	114.23	Option 2: A=5.8118, B=1257.84, C=220,74
8crzene						1,0143	N/A	N/A	78.1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.0556	N'A	N/A	64,1600	0.0024	0.0005	84.16	Option 2: A=8.841, B=1201.53, C=222.65
Ethylbenzene						6.0909	N/A	N/A	106.1700	6.0120	0.0002	106,17	Option 2: A=6.975, B=1424.255, C=213.21
Hexene (-n)						1.6765	N/A	HVA	66,1700	0.0130	6.0043	65.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyl benzene						0.0423	N/A	NA	120.2000	6.0015	0.0000	120,20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.2269	NA	NA	32,0400	0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0011	N'A	N/A	128.1600	0.0030	0.0000	128.19	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.0601	N/A	N/A	104.1500	6.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.2816	N/A	N/A	92.1300	0.0600	6.0033	82.13	Option 2: A=6.954, B=1344.8, C=219.46
Undentified Components						8.5170	N/A	N/A	88.6584	6.7529	0.9630	77_89	

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Xylenes (Mixad)	0.0756	N/A	N/A	106.1700	0.0700	0.0010	105.17	Option 2: A=7.009, B+1462.265, C=215.11

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

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Stockton Tank 18 annual - External Floating Roof Tank Stockton, California

Month:	January	February	March	InqA	May	era£	July	August	September	October	November	Decembe
Rim Seal Lossas (b):	173.6028	192.5166	227.6882	265.3714	326.7710	360,3067	338.7079	310.5718	267.3274	213.9865	167.0127	165.669
Seal Factor A (ID-mole/ft-yr):	0.7000	0.7000	0.7000	0.7000	0.7000	0,7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.700
Seal Factor B (ID-mole/it-yr (mph)*n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.300
Average Wind Speed (mph);	6.7000	6.9000	7,7000	8.3000	9.2000	9,2000	8,2000	7,7000	7,1000	6.4000	5.8000	6.400
Seal-related Wind Speed Exponent:	1.2000	1,2000	1.2000	1,2000	1_2000	1.2000	1.2000	1,2000	1,2000	1,2000	1,2000	1,200
Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid	0.1564	0.1685	0.1788	0.1940	0.2155	0.2362	0.2497	0.2439	0.2275	0.2014	0.1726	0.155
Surface Temperature (psia):	6.8836	7.2549	7.5756	6.0107	8.5869	9.0964	9.4128	92501	0.8891	8,2151	7,3890	6.870
Tank Diameter (t):	60,0000	60.0000	60.0000	60,0000	60.0000	60.0000	60.0000	60.0000	60,000	60.0000	60.0000	60.000
Vapor Molecular Weight (Ib/Ib-mole):	61,0000	61,0000	61,0000	61,0000	61.0000	61.0000	61.0000	61.0000	01.0000	61,0000	61,0000	01.000
Product Factor:	1,0000	1.0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	1,0000	1.0000	1.0000	1.000
Withdrawai Losses (Ib):	13.3468	13.3458	13.3468	13.34 66	13.3459	13,3466	13.3468	13.3468	13.3466	13.3468	13.9468	13.346
Net Throughout (gal/mo.):	4.246,068,9160 4.2							246,068,9160 4 0.0015	246,053,9160 4,2 0.0015	0.0015	246,068.9160 4 0.0015	0.001
Shell CEngage Factor (bbl/1000 sch):	0.0015	0.0015	0.0015	0.0015	0.0015 5.6000	0.0015	0.0015	5.5000	5.6000	5.6000	5.6000	5.600
Average Organic Liquid Density (Ib/gal): Tank Diameter (II):	5.6000 60.0000	5.6000 60.0000	60.0000	5.6000 60.0000	5.6000	60.0000	60.0000	601000	220000	50,0000	60.0000	60.000
Root Fitting Losses (tc):	198.1342	220,7531	265.4482	316.8840	401_3201	439.8148	401.8144	353,4410	308.0319	242,5068	187,1756	167.627
Value of Vapor Pressure Function:	0.1564	0.1685	0.1788	0.1940	0.2155	0.2362	0.2497	0.2439	0.2275	0.2014	6.1728	0.155
Vapor Molecular Weight (Ibrio-mole):	61.0000	61.0000	61,0000	61.0000	61.0000	01.0000	61,0000	61,0000	61.0000	61.0000	61,0000	61,000
Product Factor:	1.0000	1.0000	1,0000	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Tot. Ruol Fizing Loss Fact (Ib-mole/yr):	249.2911	257,7306	293.1182	321.3452	368.3441	366.3441	316.5414	263.1182	268.1340	236.9412	213.3680	236.94
Average Wind Speed (mph):	9.7000	6.9000	7,7000	8.3000	9.2000	9.2000	1.2000	7.7000	7,1000	5.4000	5.8000	6.400
Total Losses (Ib):	385.0838	426.6160	507.4832	596.6022	743.4379	013.4683	753.8692	687.1595	588.7060	459.9401	367.5351	365.643
	<u> </u>					F	Rool Fitting Loss Fi	ectors				
Root Fitting/Status				Overnity	KE	(lo-male/yr)	KFb(lb-mole/(yr n	etr :s))		6	Losses(b)	
Access Hatch (24-In, Diam.)/Botted Cover, Gaske				1		1.00		0.00		00	19,5408	
Automatic Gauge Float Well/Unbotted Cover, Unc				1		10,00		5.40	1.		584,7658	
Root Leg (3-In. Diameter)/Adjustable, Conter Area	a, Ungasketed			7		0.82		6.53	0		127,2578	
Roof Leg (3-in, Diameter)/Adjustable, Pontoon An	ea, Ungasketed			9		2.00		6.37	0.		405.3292	
Vecuum Breaker (10-in. Diam.)/Weighted Mech. /				1		6.20		1.20	0.5	94	148.01e3	
Slotted Guide-Pole Sample Wel/Gask, Sliding Co	wer, w. Float, Wiper			1		21.00		7.90	1.		2,228.0924	
Gauge-Hatch/Sample Well (8-In, Diam, I/Weighted	A Lines Actuation Incomes					2.30		0.00	0,0	~~	28.0899	

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

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

Stockton Tank 18 annual - External Floating Roof Tank Stockton, California

			Losses(lbs)	<u> </u>	
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Equilon Gasoline RVP 14.0	3,012.53	160.16	3,534.25	0.00	6,706.95
1,2,4-Trimethylbenzene	0.30	3.84	0.35	0.00	4.49
2,2,4-Trimethylpentane	15.96	7.53	18.74	0.00	42.23
Benzene	7.94	1.92	9.32	0.00	19.19
Cyclohexane	1.64	0.38	1.93	0.00	3.95
Ethylbenzene	0.77	1.92	0.90	0.00	3.59
Hexane (-n)	13.97	2.08	16.40	0.00	32.45
Isopropyl benzene	0.05	0.24	0.05	0.00	0.34
Methyl alcohol	1.17	0.22	1.37	0.00	2.76
Naphthalene	0.00	0.48	0.00	0.00	0.49
Styrene	0.03	0.13	0.04	0.00	0.20
Toluene	11.44	9.61	13.43	0.00	34.48
Unidentified Components	2,955.54	120.59	3,467.32	0.00	6,543.45
Xylenes (Mixed)	3.73	11.21	4.39	0.00	19.33

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

Identification

User Identification;	Stockton Tank 18 max daily gasoline
City: State:	Stockton
	California Shall Oli Beaduate 110
Company: Type of Tenk:	Shell Oil Products US
Description:	External Floating Roof Tank Throughput = 689,136 gal/day (1 turnover)
Description.	Throughput = 065,150 gavday (Thurnover)
Tank Dimensions	
Diameter (ft):	60.00
Volume (gallons):	689,136.00
Turnovers:	365.00
Painl Characteristics	
Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Root Characteristics	
Туре:	Pontoon
Fitting Category	Detail
Tank Construction and Rim-Sea	u System
Construction:	Welded
Primary Seal:	Liguid-mounted
Secondary Seal	Weather Shield
Deck Fitting/Status	

Access Hatch (24-In. Ulam.)/Boited Cover, Gasketed Automatic Gauge Float Well/Unbolted Cover, Ungasketed Roof Leg (3-in. Diameter)/Adjustable, Center Area, Ungasketed Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Ungasketed Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask. Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Ungask. s Haich (24-In, Ulam.)/Bolled Cover, Gaskeled

Meterological Deta used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d

Emissions Report - Detail Format

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Quantity

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Liquid Contents of Storage Tank

Stockton Tank 18 max daily gasoline - External Floating Roof Tank Stockton, Callfornia

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		Тел	nily Liquid S operature (ch	eg (F)	Liquid Bulk Temp	Vapo	r Pressure I	(مندم)	Vapor Mol.	Liquid Mass	Vapor Mass	McL.	Basis for Vapor Pressure
fixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	FradL	Fract.	Weight	Calcutations
qualon Gasoline RVP 14.0	Jan	55.08	51.49	58.67	61,57	6.8836	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Skope=3
1,2,4-Trimethylbenzene						0.0167	NA	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylpeniane						8.5161	N/A	N/A	114,2300	0.0470	0.0048	114,23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0172	N/A	N/A	76.1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=220,79
Cyclohexana						1.0586	N/A	NVA	84,1500	0.0024	0.0005	84.16	Option 2: A=6.841, B=1201.53, C=222.65
UnyDenzene						8.0913	N/A	N/A	106.1700	0.0120	8.0002	106.17	Option 2: A-6.975, B-1424,255, C-213,21
lexane (-n)						1.6910	NA	N/A	66.1700	8.0130	8.0043	86.17	Option 2: A=8.878, 8=1171.17, C=224.41
icpropyl benzene						0.0424	N/A	N/A	120.2000	D.0015	0.0000	120.20	Option 2: A=6.953, B=1460.793, C=207,78
tethyl alcohol						1.2329	N/A	N/A	32,0400	0.0014	0.0003	32.04	Option 2: A=7,897, B=1474,08, C=229,13
laphthalene						0.0011	N/A	N/A	128.1600	0.0030	0.0000	128,16	Option 2: A=6.8181; B=1585;88; C=184,32
tyrene						0.0603	N/A	N/A	104,1500	0.0008	0.0000	184.15	Option 2: A=7.14, B=1574.51, C=224.09
oluene						0.2827	N/A	N/A	\$2,1300	0.0600	0.0033	\$2,13	Option 2: A=6.954, B=1344.8, C=219.48
Inidentified Components						8.5331	NA	NVA	68,6580	0.7529	0.9830	77,89	Same 2, 180, 326, 28 (386, 2, 68219.40
ylenes (Mixed)						0.0759	N/A	N/A	106.1700	0.0700	0.0010	105.17	Option 2: A=7.009, B=1462.266, C=215.11
uilon Gasofine RVP 14.0	Feb	57.96	53.17	62.75	81.57	7.2649	N'A	N/A	61.0000	0.0700	10.0010	82.50	Option 4: RVP=14, ASTM Slope=3
2,4-Trimenylpenzene		41.54		wc.113	0	8.0168	N'A	N/A	128,1900	0.0240	0.0001	120.19	Option 2; A=7.04383, B=1573.267, C=208.50
2.4-Trimethylpeniane						0.5615	N/A	N/A	114,2300	0.0470	0.0049	114.23	Option 2: A#6.8116, B=1257.54, C=220.74
Sizena						1,1033	N/A	N/A	78,1100	0.0120	0.0025	78.11	
volohexane						1.1459	N/A	N/A	84.1600	0.0024	0.0005	84.16	Option 2: A=6.905, B=1211.033, C=220.79
Dybenzene						0.1010	N'A	N/A	108.1700	0.0120	0.0002	106.17	Option 2: A=6.841, B=1201.53, C=222.65 Option 2: A=6.975, B=1424.255, C=213.21
Exans (-n)						1.8140	N'A	NA	65,1700	8.0130	0.0044	106.17 86.17	
opropyl banzene						0.0473	N'A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.876, B=1171.17, C=224.41
ethyl alcohol				•		1.3518	N/A	N/A	32,0400	0.0015	0.0004	32.04	Option 2: A=6.963, B=1460.793, C=207.78
aphthalene						0.0013	N/A	N/A	128,1600	0.000	0.0000	128,16	Option 2: A=7.897, B=1474.08, C=229.13
trene						0.0668	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=8.8181, B=1585.86, C=104.32
oluene						0.3097	N/A	N/A	\$2,1300	0.0600	0.0035	92.13	Option 2: A=7.14, B=1574.51, C=224.09
nidentified Components						9.0025	N/A	N/A	60.5471	0.7529	8,9825	52.13 77.89	Option 2; A=6.954, B=1344.8, C=218.48
ytenes (Mixed)						0.0841	N/A	N/A	-				
ulion Gasoline RVP 14.0	Mar	60.22	54.36	66.07	61.57	7.5756	N'A	N/A	105,1700 61,0000	9.0700	0.0011	106.17 82.50	Option 2: A=7.009, B=1462.266, C=215.11
2,4 Trimcthylbenzene		00.22	38.30	00.07	10,10	0.0206	N/A	N/A		9 0340	0.000		Option 4: RVP=14, ASTM Slope=3
2,4-TrimeTrypenane						8,5994	N/A	N/A N/A	120,1900 114,2300	8.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.5
enzena						1,1749	N/A	N/A N/A	78.1108	0.0476	0.0050	114.23	Option 2: A=6.8116, B=1257, 64, C=220,74
yciohexano						1.1749	N/A	N/A N/A	78.1108 84.1600	0.0120	0.0025	76.11	Option 2: A=6.905, B=1211.033, C=220.76
Dylbenzene						8,1094	NVA NVA	N/A	105,1700	0.0024 0.0120	0.0005	84.18 105.13	Option 2: A=6.641, B=1201:53, C=222.65
axune (-n)						1.9242	N/A	N/A	88,1708	-	0.0002	106.17	Option 2: A=6.975, B=1424,255, C=213,21
opropyl benzene						0,0515	N/A	N/A	120,2000	6.0130 0.0015	0.0045	86.17 120.20	Option 2: A=6.878, B=1171,17, C=224,41
entry alcohol						1.4520	N/A	NA	32,0400	0.0015	8.0004	32,04	Option 2: A=6.963, B=1460.793, C=207.76
aphthalene						0.0015	N/A	N/A	32,0400	0.0014			Option 2: A=7.897, B=1474.08, C=229,13
yrene						0.0724	N/A	N/A	126.1500	0.0030	0.0000	128.16 104.15	Option 2: A=6.6181, B=1585.86, C=184.32
ciuona						0.3324	N/A	N/A	\$2,1300	0.0500	0.0000	104.15 \$2.13	Option 2: A=7.14, B=1574.51, C=224.09
midentified Components						9.3849	N/A	N/A	52,1300 60,6383	0.0500	0.9821	\$2,13 77,89	Option 2: A=6.954, B=1344.8, C=219.48
Aenes (Mixed)						0.0911	N/A	NVA	108.1700	0.7529	0.9021	108.17	Orden 7: 6-7 000 B 1400 000 C 017 1-
ulon Gasoline RVP 14.9	Apr	63.26	55.98	70.54	61.57	6.0167	N/A	N/A	61,0000	0.0100	0.001	82.50	Option 2: A=7.009, B=1462.266, C=215.11 Option 4: RVP=14, ASTM Stops=3
2.4-Trimethylbenzene	- + -	0010			100	0.0233	N/A	N/A	120.1900	0.0240	0.0001	120.19	
ter a second de la seconda de la se						وتنهيدن		1074	120.1300	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.5

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Benzene						1,2775	N'A	N/A	78.1100	0.0120	9.0026	78.11	Option 2: A=6.905, B=1211.033, C=220,79
Cyclohexane						1.3224	N/A	N'A	64.1600	0.0024	9.0005	84.15	Option 2: A=6.841, B=1201.53, C+222.65
Emyloerzene						9.1215	N/A	N/A	106.1700	0.0120	9.0002	105.17	Option 2: A=6.975, B+1424.255, C=213.21
Hexane (-n)						2.0815	N'A	N/A	86,1700	9.0139	0.0046	65.17	Option 2: A=6.876, B=1171.17, C=224.41
hopropyl benzene						0.0577	N/A	N'A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.953, B=1460.793, C=207.78
Methyl alcohol						1.5969	N'A	N/A	32.0400	9.0014	9.0004	32.04	Option 2: A=7.697, 8=1474.08, C=229, 13
Naphthalene						9.0017	N'A	N'A	128.1600	9.0030	9.0000	128.15	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						9.0604	N/A	N'A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B= 1574.51, C=224.09
Toluene						9.3651	N/A	N#A	92.1300	0.0600	0.0037	92.13	Option 2: A=6.954, B=1344.0, C=219.48
Unidentified Components						9.9200	N/A	N/A	60.6264	9.7529	0.9815	77.89	
Xylenes (Mixed)						9,1013	N/A	N/A	106.1700	9.0700	0.0012	106.17	Option 2: A=7.009, 8=1462,266, C=215.11
Equilon Gasoline RVP 14.9	May	67,10	58.83	75.30	61.57	8.5869	N/A	N/A	61.0000			52.50	Option 4: RVP=14, ASTM Slope=3
1.2.4-Trimethylbenzene						9.0270	N/A	N/A	120.1900	0.0240	0.0001	120,19	Option 2: A=7.04383, 8=1573.267, C=208.56
2.2,4-TrimeTrylpentane						0.7264	N'A	N/A	114,2300	0,0470	0.0054	114.23	Option 2: A=6.8118, B= 1257.84, C=220.74
Benzena						1.4173	N/A	N/A	76.1100	0.0120	0.0027	78.11	Option 2: A=6.905, 8=1211.033, C=220.79
Cyclohexane						1,4635	N/A	N/A	84,1600	9.0024	0.0006	84.16	Option 2: A=6.641, B=1201.53, C=222.65
Ethylbenzena						9.1384	N/A	N/A	106.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424,255, C+213.21
Hexane (-ri)						2,2945	N/A	N/A	86.1700	8.0130	0.0047	\$6.17	Option 2: A=6.876, 8=1171.17, C=224.41
Isopropyl benzene						0.0664	N/A	NYA	120.2000	0.0015	0.0000	120.20	Option 2: A=0.963, 8=1460.793, C=207.76
Methyl alcohol						1.7968	N¥A	N/A	32,0400	0.0014	9.0004	32.04	Option 2: A=7.697, B=1474.08, C=229.13
Naphihalene						0.0021	N/A	N/A	128.1600	8.0030	9.0000	128.16	Option 2: A=6.5181, B=1585.66, C=184.32
Styrene						0.0917	N/A	N'A	104.1500	9.0008	9.0000	104,15	Oction 2: A=7.14, B=1574.51; C=224.09
Taluena						9.4103	NA	₽¥A	92.1300	0.0600	9.0039	52.13	Option 2: A=6.954, B=1344 A, C=219.48
Unidentified Components						16.6281	N/A	t∛A	60.6111	0.7529	9.9607	77_89	0,000,000,000,000,000,000,000
Xylenes (Mbed)						6,1155	NA	NVA	106.1700	9.9700	0.0013	105.17	Option 2: A=7.608, B=1462.266, C=215.11
Equilon Gasoline RVP 14,9	Jun	70.33	61,45	79.22	61.57	9.0984	N/A	N/A	61.0000	0.0100	0.001.0	82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimethylbanzene			•,,.•		01.01	0.0306	N/A	N/A	120,1900	9.0240	0.0001	120.19	Option 2: A=7.04383, 8=1573.267, C=208.56
2.2.4-Trimethylpentane						0.7967	N/A	N'A	114,2300	9.0470	9.0056	114.23	Option 2: A=6.6118, 8=1257.84, C=220.74
Benzene						1.5449	N/A	N'A	78,1100	0.0120	9,0023	73,11	Option 2: A=6.905. B=1211.033. C=220.76
Cycloherane						1.5922	N/A	N/A	84.1600	0.0024	9.0006	84.16	
Elhyberzene						0.1542	N/A	N/A	106_1700	9.9120	9.0003	106.17	Option 2: A=6.841, B=1201.53, C=222.65 Option 2: A=8.975, B=1424.255, C=213.21
Hexane (-n)						2,4880	N/A	N/A	85,1700	9.9130	6.0048	66.17	•
Isoprocyl benzene						0.0745	N/A	N/A	120,2000	9.0015	0.0000	120.20	Option 2: A+6.876, B=1171.17, C=224.41
Methyl stochol						1.9820	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=6.953, B=1460.793, C=207.78
Naphthalene						0.0025	N/A	N/A	128,1600	0.0030	-		Option 2: A=7.897, B=1474.08, C=229.13
Shrene						0.1023	N/A	N/A	128,1600	0.0006	9.0000	128,15	Option 2: A=5,8161, 8=1585.86, C=184.32
Toluene						0.4520	NA	N/A	92.1500	9.0500	0.0000	104.15 92.13	Option 2: A=7.14, 8=1574.51, C=224.09
Undertified Components						11.2564	N/A	N/A	60.5960	9.7529	8,5801	77.89	Option 2, A=6.954, B=1344.8, C=219.48
Xylenes (Mixed)						6,1283	N'A	N/A	106,1700		9,0813	106.17	Option 2: A=7.009, B=1462.266, C=215,11
Equilon Gasoline RVP 14.0	J.J.	72.25	ഒര	61.48	61.57		N/A	N/A	61.0000	9.9700	610013	106,17 E2.50	
1,2,4-Tripetarbenzene	501	144	03.04	01.40	01-27	9.4125 0.0329	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 4; RVP=14, ASTM Slope=3
2,2,4-Trimethylpentane							N'A	N/A					Option 2: A=7.04383, B=1573.267, C=208.56
Benzene						9.6398	N/A		114,2300	0.0470	9.0057	114.23	Option 2: A=6.8119, 8=1257.84, C=220.74
Cyclohexane						1.6250		NA	78.1100	9.9120	0.0028	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						1.6728	N/A	N/A	84,1600	6.0024	9.0006	84,18	Option 2: A=5.841, B=1201.53, C=222.65
						9.1642	N'A	N/A	106,1700	0.0120	9.0008	106.17	Option 2: A=6.975, 8=1424.255, C=213.21
Hexane (-n)						2.6088	N/A	N/A	86.1700	9.0130	9.0049	86.17	Option 2: A=6.876, B=1171.17, C=224.41
sopropyl benzene						6.0798	NA	N/A	120.2000	0.0015	6.0000	120.20	Option 2: A=6.953, B=1460.793, C=207.78
Methyl alcohol						2.0992	NA	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7,897, B=1474.08, C=229.13
Naphthelene						0.0027	N/A	NA	128.1600	0.0030	0.0000	120.16	Option 2: A=6.8181, 8=1585.88, C=184.32
Styrene						0,1091	N/A	N/A	104.1500	0.0006	0.0000	104,15	Option 2: A=7.14, 8=1574.51, C=224.09
Toluene						0.4784	N'A	NYA	92.1300	0.0600	0.0041	92.13	Option 2: A=6.954, B=1344.6, C=219.48
Unidentified Components Videous Different						11.6423	N/A	N/A	60.5901	0.7529	0.9797	77.69	
Xylenes (Mixed)		7	aa - 4		.	9,1373	N/A	NA	108.1700	6.0700	6.0014	106.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasoline RVP 14.0	Aug	71,45	62.84	80,06	61.57	9,2601	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Stope=3
1,2,4-Trimetrytoerzene 3.3.4 Trimetrytoerzene						9.0319	N/A	N/A	120,1900	9.0240	9,0001	120.19	Option 2: A=7.04383, 8=1573.267, C=208.56
2.2.4-Trimemylpentane						0.6214	N/A	N'A	114,2300	0.0470	0.0058	114.23	Option 2: A=6.6119, B=1257.64, C=220.74
Benzene						1.5910	N/A	NA	78,1100	0.0120	9.0028	79.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane Etc. Boursons						1.6366	N/A	N/A	64,1600	0.0024	0.0006	64.18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1599	N/A	N'A	106.1700	0.0120	9.0003	105.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexana (-n)						2.5576	N'A N'A	NA	65.1700	9.9130	0.0048	89,17	Option 2: A=6.878, B=1171.17, C=224,41
isopropyi benzene						0.0776	N/A	NA	120.2000	9.0015	6.0006	120.20	Option 2: A=6.953, B=1460.793, C=207.78

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89.612-0 (8.9401-8 (456.3-4 :5 robdo	EL 25	£200.0	0090.0	0001725	¥/N ¥/N	ViN	BIEZ O						i osiene Unidertified Companents
Opport 2. A.7.14, B.1574,51, C.224,09	SL'HOL	0000.0	8000.0	0051'901	ViN	¥/N	1090.0						كالانجناق
Option 2: A=6.3161, B= 1585,36, C= 184,32	817821	0000'0	00000	128.1600	ViN	¥/N	110010						anelaritrigaN
Option 2: A=7,697, B=1474,06, C=229,13	32.04	6000.0	¥100'0	35.0400	Van	V/N	1.2289						toricola tyrcola
Option 2: A=6,963, 8= 1460,783, C=207,76	05.051	000010	5100.0	120,2000	¥81	¥/N	C2+0'0						Isopropy benance
Option 2: A=6.876, B=1171, 17, C=224, 41	£1.5\$	£100.0	00100	0021198	¥/N	¥/N	59291						(u-) 8072384
Option 2: Am6.975, 8-1424.255, C+213.21	21'901	2000 0	01120	00211901	¥/N	Van	606010						enscheitete
Option 2: A=6.841, B=1201.53, C=222.65	91.10	2000.0	0.0024	0091'+8	¥/N	VAN	9550"1						Cydonexane
Octor 2: A=6.906, B=1211.033, C=220.79	11.97	+200.0	0210.0	0011782	Y/N	¥/N	E>1011						geureus
•5.055-0, •8.7251-8, 8118.8-4:5 mixed	C2 +11	B>00.0	0410.8	11475300	¥/N	W/N	\$7150						anstractivitierenT-+.2.2
0ption 2: A=7,04383, B=1573,267, C=200 56	EL 051	1000.0	0.0240	1501300	¥/N	¥/N	£910.0						908309000001-4,5 F
C+9qoita MT2A , MT-9VR : A notico	0579			0000.18	VAN	W/N	502879	15-19	PP 85	15115	96°#S	39()	0.41 9VR andozzo nolup3
rr.2rs=0.365.54r=8.200.7=4.5 rong0	(1.90L	1100.0	0020'0	00/1.901	¥#N	¥/N	8990'0						(benik) terah(X
	69° <i>11</i>	£285 0	6257,0	95149.03	VAN	¥/N	2221.8						UnidersTeed Components
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Option 2: A-7,14, 8-1574.51, C-224.09	SLINDL	000000	90000.0	0051701	¥/N	¥/N	069010						ananyis
Option 2: A=6.0181, 8=1585.66, C=164.32	91°821	000010	0 0030	128.1600	V/N	W/N	P10010						analerizingen
Option 2: A=7,897, B=1474.08, C=229.13	10.22	H000T0	A100.0	32 OH00	¥∕N	V/N	51601						forfoots fyritehi
Oktion 2: A=6.963, 8=1460,783, C=207,78	150 20	0,000	S100.8	120,2000	¥/N	¥/N	06>0'0						eneurad hyperies
Option 2: A=6.676, 8=1171,17, C=224,41	71.83	110010	0.0130	0021199	AW	AVM.	0250TI						(u) sustah
Option 2: A-6.975, B=1424.255, C=213.21	£1.801	00005	07150	00/1/201	YAN	Υл	CH01.0						auazuaqykyzy
Option 2: A=0.641, 8=1201.53, C=222.65	51'19	5000-0	100024	0091'18	YAN	Y/N	8471.1						ensister of the second s
87.055-0,5051.151-8,505,8-4.50 (0000)	11.07	5200'0	00120	CO11'82	¥/N	V/N	21C1 1						acazuag
Option 2: A-7.04 383, 8-1 573 267, C-206.56 Option 2: A-8.51 46, 8-1 257.64, C-220.74	114 23	0500'0	0210.0	0062.111	A'M	V/N	\$925-0						ensineckyritemnT-4,S,S
C=0002 ATRA, AI-979 (APP) 00000	61.051	1000-0	0.0240	150,1800	Y/N	V/N	\$610.0						eneurediyitterin T-4.S.1
Option 2; A=7.009, 8+1462.266, C=215.11	05-20 21-901	210070		¢1,0000	V/N	V/N	0685.7	25.13	65.69	12.42	29°95	AON	0.11 9VA snitesed nations
11 312-3 33C 2711-8 000 2-4-20-00	69°11	21000	0020'0 6252'0	00/1901	VAN	V in	0.1062						XHenes (Wited)
Option 2: A-6,954, B=1344,8, C=218,48	E1725	800010	009010	6023 09	VAN	WN	£121'01						theory Components
Option 2: A=7.14, 6=1574,51, C=224,09	51.101	000070	900010	005176	¥/N ¥/N	¥/N	6080-0						Toluene
SE 481 - O . 38 2821 - 8 . 1918 - 9 . 5 . 6 . 00000	91'82'I	000070	00000			Y/N	179000						Strene
Option 2: A=7,897, 8=1474.00, C=229.13	10'20	100010	\$100'0	1581 (600 · 35°0«00	¥∕N	¥/N	6100.0						analarurqsM
Option 2: A=6.953, B=1460.793, C=207.78	OZ OZI	000070	510018	120,2000		Y/N	89991						Interial Article
Option 2: A=6.878, 8=1171,17, C=224,41	21.99	8100.0	001070	0021199	A'N A'N	AV AV	1090'0 19951'Z						scorophy beneaus
Option 2: A-6.975, B-1424, 2555, C-213,21	21 90	£000T0	0210.0	0021 901	¥/N ¥/N	¥/N	V/21 0						(n-) ensish
Option 2: A=6.841, B= 1201.53, C+222.65	01.00	\$000.0	¥200'0	0091.28	Y/N	¥/N	02/210						Eliytoentene
Option 2: A=6.905, 8-1211.033, C=220.75	t1'97	\$200.0	02:00	0011782	Y/N	YAN	1 3568						Cycloherane
Option 2: A=6.6118, B=1257, 84, C=220,74	114'53	E900'0	04+010	11+5200	YAN	VAN	003910						
Option 2: A=7.04383, B= 1573.267, C=208.56	61 021	1000.0	0.0240	0061'021	YAN	W/N	0.0246						animating a
E-ogois UTEA . M-949 . Maine	05 28			000019	V/N	VAN	ISIZE	<i>LS</i> *19	91.12	CU195	P9'19	ÞΟ	enstractional - F.S. I
11.215-0, 365, 541-8, 600, 7-A 15 notice	21'901	£100.0	002810	0021-901	V/N	VAN	0 /533	L. 1.3	31 14	C1 83	1019	-0	0.41 TYP 0.000 200 DATE
	69712	102510	6251'0	60.6033	¥/N	VA	HGG0 OL						Unidentified Components Xytenes (Mixed)
Option 2: A=6.954, B=1344.B, C=219.48	£1725	010010	0090'0	00C1 26	¥/N	¥/N	TACA.0						Totoere
0pdon 2: A=7.14, 8-1574.51, C=224.09	SI'101	000010	B000°0	0051-101	¥/N	¥/N	6460"0						energi2
Option 2: A=6.6101, 9-1565,66, C+164.32	91 92	000070	0000.0	0091'021	VAN	¥/N	6200.0						analarticah anany2
EI. 255-0 .80. 17+1-8 .728. TA .5 mildO	35.04	P000.0	\$100°0	33 OH 60	¥/N	¥/N	M505"L						incols from
07.105-0 EET.03+1-8 E3E.3-A 12 noiseO	150.20	000010	\$100.0	1 20,2000	Y/N	¥/N	S170.0						euezueg juliosi
1%,%25=3 .{1,17,11=8 ,878,8=4 :S milition	21.99	6100.0	0510.0	00/1199	V/N	W AN	24083						(U-) BUETAH
Option 2: A=6.975, 9+1424,255, C=213.21	21.301	£000.0	0.0120	0021'901	¥/N	¥/N	9/110						anaznadini a
Option 2: A.6.641, 8-1201,53, C-222,65	91.18	900070	>20010	0031.48	¥/N	¥/N	26051						Cycloherane
Option 2: A=6.905, 650,1121-6,220,79	11.87	1500.0	02100	0011.87	AW	¥/N	C261 I						Benzene
Option 2: A=6.6116, 6=1257.64, C=220.74	62741	5500'0	021070	114 5300	¥/N	V/N	5892.0						entirectyrtents 1. A.S.S.
Option 2: A=7 04363, 8= 1573,267, C=206,56	81.0ST	1000.0	0*20.0	150'1900	¥/N	¥/N	1620.0						enscredit/domail.A.S.1
E=agol3 MT2A _+1=9VR :+ noilgO	02.58			0000.18	Y/N	A'N	1699.9	15.18	11.91	92°L9	CO 69	des	Culton Gasoline RVP 14.0
00000 2: A=7,009, B=1462 266, C=215.11	21.301	100.0	002070	00211901	VN	¥/N	70. 1337					_	X/poes (reces)
	69°11	6616.0	6252.0	¥C65 09	₩/N	¥/N	962711						Unider taged Components
Option 2: Ar6.954, 8=1344.8, C=215,48	£178	1100.0	009010	0061.58	A'N	¥/N	C197'0						Toluene
Option 2: A=7,14, 8=1574,51, C=224,09	SC'HOL	000010	2000.0	0051.101	AW	¥/N	290110						Synteme
20.481-0.281.92-161.818.8-A-2 military	91.921	000070	0.0030	0091,051	¥/N	¥/N	0.0026						enalertings/
Er.252-3, 80, 4741-8, 768,74A :S noigO	10.55	P000.0	¥100'0	35,0400	AW	W/N	20434						lontocke hyrtoshe

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Xylenes (Mixed) 0.0756 N/A N/A 106.1700 0.0700 0.0010 106.17 Option 2: A=7.009, B=1462.266, C=215.11

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

Stockton Tank 18 max daily gasoline - External Floating Roof Tank Stockton, Callfornia

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (b):	173.5028	192.5168	227.6882	266.3714	328.7710	360.3067	338,7079	310.5716	267.3274	213.9865	157.0127	165.6694
Seal Factor A (Ib-mole/fl-yr):	0.7000	0.7000	0.7000	0.7000	D.7000	D.7000	0,7000	0.7000	D.7000	0.7000	9.7000	0.7000
Seal Factor B (Ib-mole/It-yr (mph)*n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	D.3000	0.3000	8.3000	0.3000
Average Wind Speed (mph):	6.7000	6.9000	7.7000	8.3000	9,2000	9.2000	8.2000	7,7000	7,1000	6.4000	5.8000	6,4000
Seal-related Wind Speed Exponent:	1.2000	1.2000	1.2000	1.2000	1.2000	1.2000	1,2000	1,2000	1.2000	1.2000	1.2000	1,2000
Value of Vapor Pressure Function; Vapor Pressure at Daily Average Liquid	D.1564	0.1685	0.1788	0.1940	0.2155	0.2362	0.2497	D.2439	0.2275	0.2014	8,1726	0.1555
Surface Temperature (psia):	6.6838	7_2649	7.5756	8.0107	8.5869	8.0984	9.4128	9.2801	8.6891	5.2151	7.3890	6.8705
Tenk Diameter (II):	60.0000	60,0000	60.0000	60.0000	60,0000	60.0000	60.0000	60.0000	50.0000	60.0000	60.0000	60.0000
Vapor Molecular Weight (Ib/lo-mole):	61.0000	81,0000	B1,0000	61.0000	61.0000	61.0000	61.0000	61.0000	61,0000	61.0000	61,0000	61.0000
Product Factor:	1.0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1,8000	1.0000	1,0000	1.0000
Withdrawal Losses (b):	65,8881	65.8881	65.6881	65.8891	65.8891	65.8861	65.6881	65.8981	65.8881	65.8851 961.220.000020	65.6681 961.220.00020	65.8881 961,220,000
Net Throughout (galimo.); Shell Clingage Factor (bbl/1000 soft);	20,961,220.000020. 0.0015	961.220.000020, 0.0015	0.0015	0.0015	0.0015	961,220,000020, 8,0015	0.0015	0.0015	0,961,220.000020; 0,0015	0.0015 <u>220</u> .00002	0.0002	0.0015
Average Organic Liquid Density (bloch:	5,6000	5.6000	5.6000	5,6000	5.6000	5,6000	5.6000	5,6000	5.6000	5.6000	5,6000	5.6000
Tank Diameter (10:	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.0000	60.000
Roof Fitting Lasses (b):	198.1342	220,7531	266.4482	316.8840	401.2201	439.8148	401.8144	353.4410	308.0318	242.6068	167,1756	187.8274
Value of Vapor Pressure Function:	0.1564	0,1685	D.1768	0.1940	0.2155	0.2362	0,2497	0.2439	0.2275	0,2014	0.1726	B.155
Vapor Molecular Weight (Ib/Io-mole):	61.0000	61,0000	61.0000	61.0000	61.0000	61.0000	61.0000	61.0000	61.0000	61.0000	01.0000	61.0000
Product Factor:	1,0000	1.0000	1,0000	1.0000	1.0900	1.0000	1,0000	1.0000	1.0000	1,0000	1,0000	1.000
Tot. Roof Fiting Loss Fact (b-mole/yr):	249.2911	257.7306	290.1182	321.3452	368.3441	366.3441	318.5414	293.1182	266.3340	236.9412	213,3680	236.941
Average Wind Speed (mph):	B.7000	6.9000	7,7000	8.3000	9.2000	9.2000	B.2000	7.7000	7.1000	6,4000	5.6000	6.400
Total Losses (b):	437.6251	479,1579	560.0245	649.1435	795.9792	866.0035	806.4105	739.9007	641.2473	522.4814	420.0764	419,384
					•		Root Ficting Loss	Factors		· · · · · · · · · · · · · · · · · · ·		
Root Fitting/Status	_			Qua	πzγ	KFa(lo-mole/yr)	KPb(lo-mole/y	r mph*nj)		TB-	Losses(b)	
						1.60		B.00			18.5408	
Access Hatch (24-In. Diam.)/Botted Cover, Ga Automatic Geoge Flost Well/Unbotted Cover,					-	14.00		5.40		. 18	584,7658	
Roof Leg (3-in, Diameter/Adjustable, Center					;	0.82		0.53		1.14	127,2678	
Roof Leg (3-in, Diameter) Adjustable, Ponion					4	2.00		6.37		0.91	405.3292	
Vacuum Breaker (10-in, Diam.)/Weighted Me					ī	6.20		1.20		1.94	146.0143	
Slotted Guide-Pole/Sample Well/Gask, Sliding	a Cover, w. Float, Whee				i	21.00		7.90		.80	2,228.0924	
Gauge-Hatch/Sample Well (8-in, Diam, I/Weld		1				2.30		0.00		1.00	28.0899	

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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

Stockton Tank 18 max daily gasoline - External Floating Roof Tank Stockton, California

		Losses(lbs)												
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions									
Equilon Gasoline RVP 14.0	3,012.53	790.66	3.534.25	0.00	7,337.44									
1;2,4-Trimethylbenzene	0.30	18.98	0.35	0.00	19.62									
2,2,4-Trimethylpentane	15.96	37.16	18.74	0.00	71,86									
Benzene	7.94	9.49	9.32	0.00	26.75									
Cyclohexane	1.64	1.90	1.93	0.00	5.47									
Ethylbenzene	0.77	9.49	0.90	0.00	11.16									
Hexane (-n)	13.97	10.28	16.40	0.00	40.64									
Isopropyi benzene	0.05	1.19	0.05	0.00	1.29									
Methyl alcohol	1.17	1.11	1.37	0.00	3.65									
Naphthalene	0.00	2.37	0.00	0.00	2.38									
Styrene	0.03	0.63	0.04	0.00	0.71									
Toluene	11.44	47.44	13.43	0.00	72.31									
Unidentified Components	2,955.54	595.29	3,467.32	0.00	7,018.15									
Xylenes (Mixed)	3.73	55.35	4.39	0.00	63.47									

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TANKS 4.0.9d Emissions Report - Detail Format Total Emissions Summaries - All Tanks in Report

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

Tank Identification				Losses (lbs)
Stockton Tank 18 annual	Shell Oil Products US	External Floating Roof Tank	Stockton, California	6,706.95
Stockton Tank 18 max daily gas	soline Shell Oil Products US	External Floating Roof Tank	Stockton, California	7,337.44
Total Emissions for all Tanks:				14,044.39

للمصبح وجماعهم والمراج

RVP to TVP for Tank under N-758-14

Permit to operate N-758-14-3 limits TVP to 11 psia. The Tanks runs were made at RVP of 14 psia. The following calculations indicate that RVP of 14 psia equates to 8.7 psia, which is below the 11 psia limit.

Per Appendix B of Rule 4623,

 $TVP = (RVP)e^{[Co(IRTEMP - ITEMP)]}$, where

Co = -8,178 per Table C-3 of Rule 4623 IRTEMP = $1/(Ts + 459.69) = 1/(81.48^{1} + 459.69) = 0.001848$ ITEMP = 1/559.69 = 0.001787

Inserting the above parameter in the equation,

TVP = 8.5 psia

The correction factor is estimated using the following equation and is added to the calculated TVP of 8.5 psi.

Since the RVP >3,

 $CF = e^{[(2.3452061 \log (RVP)) - 4.132622]} = 0.2 \text{ psia}$

Therefore,

TVP (corrected) = 8.5 psia + 0.2 psia = 8.7 psia

¹ Maximum temperature per Tanks 4.0.9d program for July

N-758-16-0 Tanks 4.0.9d Emissions Reports

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N-758-16-0

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

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Identification

User Identification:	Stockton Tank 24 - max annual throughput	
City:	Stockton	
State:	California	
Company:	Shell Oil Products US	
Type of Tank:	Internal Floating Roof Tank	
Description:	Storing gasoline with maximum annual throughput	
Tank Dimensions		
Diameter (it);	85.00	
Votume (gallons):	2,226,000.00	
Turnovers:	73.14	
Self Supp. Roof? (y/n):	N	
No. of Columns:	1.00	
Eff. Col. Diam. (ft):	1.00	
Paint Characteristics		
Internal Shell Condition:	Light Rust	
Shell Color/Shade:	White White	
Shell Condition	Good	
Roof Color/Shade:	White	
Reaf Condition:	Good	
Rim-Seal System		
Primary Seal:	Mechanical Shoe	
Secondary Seal	Rim-mounted	
Deck Cherecteristics		
Deck Fitting Category:	Detail	
Deck Type:	Welded	
Deck Fitting/Status		

Access Hatch (24-In. Diam.)/Bolted Cover, Gasketed Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actualion, Gask. Column Well (24-in. Diam.)/Pipo Col.-Siding Cover, Gask. Ladder Well (36-in. Diam.)/Siding Cover, Gasketed Roof Leg (3-In. Diameter)/Adjustable, Center Area, Sock Sample Pipe or Well (24-in. Diam.)/Sit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.)/Sit Fabric Seal 10% Open Vacuum Breaker (10-in. Diameter)/Adjustable, Pontoon Area, Sock Slotted Guide-Pole/Sample Well/Gask Sliding Covr. w. Float, Sleeve, Wiper

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

Quantity

16

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

Stockton Tank 24 - max annual throughput - Internal Floating Roof Tank Stockton, California

			ully Liquid Se		Liquid _Bulk				Vapor	Liquid	Vapor		
ixture/Component	Month	Avg.	iperatura (di Min.	Max.	Temp (deg F)	Vepol Avg.	Pressure (Mén.	pela) Max.	Mai. Weight	Masa FracL	Mass FracL	Mol. Weight	Basis for Vapor Pretsure Calculations
guilon Gascilne RVP 14.0		55.08	51,49	58.67	61,57	6.8336	N/A	N/A	61.0000			82.50	Option 4: RVP=14, ASTM Slope=3
1.2,4-Trimethybonzene						0.0167	N/A	N'A	120,1900	8.0240	0.0001	120,19	Option 2: A=7.04383, B=1573,267, C=208.56
2,2,4 Trimethylpantane						0.5161	N/A	N/A	114.2300	0.0470	8.0048	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Senzena						1.0172	N/A	N'A	78,1100	0.0120	0.0024	78.11	Option 2: A=6.905, 8=1211.033, C=220.79
ydoherane						1,0586	N/A	N/A	84.1630	6.0024	0.0005	84.16	Option 2: A=6.841, 8=1201.53, C=222.65
by benzene						0.0913	N/A	N/A	106,1700	9.0120	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
le=ans (-n)						1.6810	N/A	N/A	85.1700	0.0130	0.0043	66.17	Option 2: A=6.676, B=1171.17, C=224.41
iopropyl benzene						0.0424	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.953, 8=1460.783, C+207.78
fethyl alcohol						1.2329	N/A	N/A	32.0400	0.0814	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
laphtheicne						0.0011	N/A	₩A.	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.88, C=184.32
ityrene Toluene						0.0503	N'A	N/A	104.1500	80008	0.0000	104,15	Option 2: A=7.14, B=1574.51; C=224.09
Inidentified Components						0.2827	N/A	N/A	92.1300	0.0600	0.0033	92.13	Option 2: A=6.954, B=1344.8, C=218.48
vienes (Mized)						8.5331 8.0759	N/A N/A	N#A N#A	60.6580 106.1700	0.7529	0.9630	77,89 106,17	
ulion Gasoline RVP 12.5	Feb	57.96	53.17	62.75	61.57	6.3988	N/A	N/A	63.0000	00/00	0.0018	82.50	Option 2: A=7.009, B=1452.258, C=215.11 Option 4: RVP=12.5, ASTM Stops=3
2.4-Trimelivibenzono		07.00		02.75	01.57	0.0189	N'A	N/A	120,1900	0.0240	0.0001	120.18	Option 2: A=7.04383, B=1573.287, C=208.56
2.4-Trimethyloentane						0.5815	N/A	N/A	114,2300	8.0470	0.0054	114.23	Option 2: A=6.8118, B=1257.84, G=220.74
lenzene						1,1033	NUA.	N/A	76.1100	0.0120	0.0027	78.11	Option 2: A=6.905, 8=1211,033, C=220.79
yciohexana						1,1459	N/A	NA	84,1800	0.0024	0.0006	64.16	Option 2: A=6.841, B=1201.53, C=222.65
inyberzene						0.1010	N/A	N/A	106.1700	0.0120	0.0002	108,17	Option 2: A=0.975, B=1424.255, C=213.21
texane (-n)						1.8140	N/A	N/A	66.1700	6,8130	0.0045	66.17	Option 2: A=6.678, B=1171.17, C=224.41
sopropyl benzene						0.0473	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=8.963, B=1460.793, C=207.78
lethyl alcohol						1.3519	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
aphthalene						0.0013	NºA	NVA.	128.1600	0.0030	0.0000	128,18	Option 2: A=6.8161, 8=1585.85, C=184.32
tyrene						6.0668	N/A	N/A	104_1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
oluene						0.3097	N/A	N/A	92,1300	8.0600	0.0038	92.13	Option 2: A=8.954, B=1344.8, C=216.48
inidentified Components						7.9164	N'A	N/A	62,6258	0.7529	0.9807	77,89	
Vienes (Mixed) Izilon Gasoline RVP 12.5	NA					0.0641	N/A	N/A	106,1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1462.268, C=215.11
2.4-Trimethyberzene	Mar	60.22	54.36	66.07	61.57	6.6772	N/A N/A	N/A	63.0000			62.50	Option 4: RVP+12.5, ASTM Stope=3
2,4-Trimethylpentane						0.0205	r¥A N∕/A	N/A N/A	126.1900 114.2300	0.0240 0.0478	0.0001	120.19 114.23	Option 2: A=7.04383, B=1573.287, C=208.56
lenzene		-				1,1749	N/A	N/A	78,1100	0.0120	0.0029	78,11	Option 2: A=8.81 18, 8=1257.84, C=220.74 Option 2: A=8.905, B=1211,033, C=220.79
Velohexane						1,2185	N/A	N/A	84,1600	0.0024	0.0006	84.16	Option 2: A=6.841, 8=1201.53, C=222.65
thereas						0,1094	N/A	N/A	105.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424.255, C=213.21
exane (-n)						1,6242	N'A	N/A	86,1700	0.0130	0.0049	88.17	Option 2: A=5.876, B=1171.17, C=224.41
opropyl benzene						0.0515	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=8.953, B=1460.793, C=207.79
tethyl alcohol						1.4520	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A=7.697, 8=1474.08, C=229.13
taphthetene						0.0015	N/A	N/A	128.1600	0.0030	0.0000	128.18	Option 2: A=5.8181, B=1585.86, C=184.32
ilynene						0.0724	N/A	N/A	104,1500	0.0003	0.0000	184.15	Option 2: A=7.14, B=1574.51, C=224.09
duene						0.3324	N/A	N/A	92.1300	0.0600	0.0039	92.13	Option 2: A=8.954, B=1344.8, C=219.46
Unidentified Components						8.2582	N/A	N/A	62,6168	0.7529	0.9803	77_89	

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Xylenos (Mixed)						0.0911	N/A	N/A	108,1700	0.0700	0.0013	108.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasoline RVP 12.5	Apr	63.28	£5.9 6	70.54	61.57	7.0679	N/A	N/A	63.0000			62.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethybenzene						0.0233	N'A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.257, C=208.58
2.2.4-Trimethylpontano						0.6539	N/A	N/A	114,2300	6.0470	0.0057	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Benzene						1.2775	N/A	N/A	76_1100	0.0120	0.0028	78,11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3224	N/A	N/A	84.1600	0.0024	0.0006	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1215	N/A	N/A	106.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.0815	N/A	N/A	86.1700	0.0130	0.0050	86.17	Option 2: A=8.876, B=1171.17, C=224.41
isopropyl benzene Methyl alcohol						0.0577	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.953, B=1450.783, C=207.78
						1.5969	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0017	N/A	N/A	128.1600	0.0030	0.0000	128,16	Option 2: A=6.8161, 6=1585.86, C=164.32
Styrene						0.0804	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene Heldert Ted Company						0.3651	N/A	N/A	92.1300	6.0600	0.0041	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						9,7389	N/A	N/A	62.6045	0.7529	0.9797	77.96	
Xytanes (Mixed)						0.1013	NA	N/A	106.1700	0.0700	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilon Gesofine RVP 5.99	May	67.10	58.63	75.36	61,57	3.3580	NA	N/A	8000.83			82.50	Option 4: RVP-5.99, ASTM Slope-3
1,2,4-Trimethylbenzene						0.0270	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2.2.4 Trimemylpentane						0.7294	N/A	N/A	114.2300	6.0470	9.0123	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Benzane						1.4173	N/A	N/A	78.1100	6.0120	0.0061	78.11	Option 2: A=6.905, 8=1211.033, C=220,79
Cyclohexane						1.4635	N/A	N/A	84.1900	0.0024	0.0013	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1384	N/A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexana (-n)						2.2945	N/A	N/A	B6,1700	0.0130	0.0107	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyt benzene						0.0664	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2; A=6.953, B=1460.793, C=207.78
Methyl alcohol						1.7968	·N/A	N'A	32.0400	0.0014	6.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Nephchalene						0.0021	N/A	N'A	128,1900	0.0030	0.0000	128.16	Option 2: A=8.8181, 8=1585.88, C=184.32
Shrene						0.0917	N/A	N/A	104,1500	0,0008	0.0000	104,15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene						0.4103	N/A	N/A	92.1300	0.0600	0.0088	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unident/lied Components						4.1089	N/A	N/A	67.2321	0.7529	0.9562	77,89	
Xylenes (Mixed)						0.1155	N/A	N/A	106,1700	0.0700	0.0029	106.17	Option 2: A=7.009, 8=1452.255, C=215.11
Equilon Gasoline RVP 5.99	ປະກ	70.33	61.48	79.22	61.57	3.6161	N'A	N/A	68.0000			62.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0396	N/A	N/A	120.1900	6,0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimetryipentane						0.7967	N'A	N/A	114,2300	0.0470	0.0128	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Benzene						1.5448	N/A	N/A	78_1100	0.0120	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohezane						1.5922	hựa	N/A	84,1900	0.0024	0.0013	84,16	Option 2: A=6.841, B=1201.53, C=222.65
Elhyiberzena						0.1542	N'A	N/A	106.1700	0.0120	9.0006	106.17	Opton 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2,4880	N'A	N/A	86.1700	0.0130	0.0109	66.17	Option 2: A=6.676, B=1171.17, C=224.41
isopropyi benzene						0.0748	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methol alcohol						1,9820	N'A	N/A	32,0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphihalene						0.0025	N/A	N/A	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8101, B=1585.86, C=184.32
Styrene						9.1023	N'A	N/A	104.1500	0.0008	0.000.0	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.4520	N/A	N/A	92,1300	0.0600	0.0091	92.13	Option 2: A=6.954, B=1344.8, C=219.46
Unidercified Components						4.3817	N'A	N/A	67.2114	9.7529	0.9551	77,89	
Xytenes (Mixed)						0.1288	N/A	N/A	105.1700	0.0700	0.0030	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilion Gasoline RVP 5.99	لىد	72.25	63.02	61.48	61.57	3,7578	N'A	N/A	0000.88			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trinestybenzene						0.0329	N'A	N/A	120.1900	0.0240	0.0003	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane						0.8396	N/A	N/A	114.2300	0.0470	0.0127	114.23	Option 2: A=8.8118, B=1257.84, C=220.74
Berzane						1.6250	N/A	N/A	78.1100	0,6120	0.0063	78.11	Option 2: A=6.905, B=1211.033, C=220.78
Cyclohexane						1,6728	N/A	N/A	84,1600	0.0024	0.0013	94,15	Option 2: A=8.841, B=1201.53, C=222.65
Ethylbenzens						0.1842	N/A	N/A	106.1706	0.0120	6.0005	106.17	Option 2: A=6.975, B=1424.256, C=213.21
Hoxano (-n)						2.0068	N/A	N/A	\$6.1706	0.0150	9.0110	86.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyi benzene		•				0.0798	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						2.0792	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalana						0.0027	N/A	NA	128,1900	0.0030	0.0000	128,16	Option 2: A=8.8161, 8=1585.86, C=184.32
Styrene						0.1091	N/A	N/A	104,1500	0.0008	0.0000	104,15	Option 2: A=7.14, B=1574.51, C=224.09
Totuene Unide stilled Components						0.4784	N/A	N/A	92,1300	0.0600	6.0093	92,13 77,60	Option 2: A=6.954, B=1344.8, C=210.46
Unidentified Components						4,5501	N/A	N/A	87,1990	0.7529	0.8544	77,59	O-10-014 7000 D-1100 000 0 015
Xylenes (Mixed) Equilion Gasoline RVP 5.99	8 1.45	71.45	~ ~ ~	80.0 7	A	0.1373	N'A	N/A	106.1700	9.0700	0.0031	106.17	Option 2: A=7.009, B=1462.268, C=215.11
1,2,4-Trimstrytbenzene	Aug	71,45	62.84	80.06	61.57	3.6975	N/A N/A	N/A N/A	68.0000	0.0240	0.0000	82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylpentane						0.0319 0.8214	N/A N/A	N/A	120.1900 114.2300	0.0240	6.0000	120.19 114.23	Option 2: A=7.04383, B=1573.267; C=208.58
2,2,4 Pronosygenusno Benzone						1.5916	N/A	N/A	76.1100	0.0478 6.0120	0.0353	78.11	Option 2: A=6.8116, B=1257.84, C=220.74 Option 2: A=6.905, B=1211.033, C=220.79
Carlos and All of the						1.0010	110		70.1100	0.0120		70.11	

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Cyclohexane						1.6386	N/A	N/A	64.1600	6,0024	6.0013	84.16	Option 2: A=6.841, B=1201_53, C=222_65
Ethylbenzene						0.1599	N/A	N/A	105.1700	0.0120	0.0006	106.17	Option 2: A=5.975, B=1424.255, C=213.21
Hexane (-n)						2.5576	N/A	N/A	86,1700	0.0130	0.0109	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						6.0776	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl alcohol						2.0494	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897. B=1474.08, C=229.13
Naphthalene						0.0026	N/A	N/A	128.1600	0.0030	8.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.1062	N/A	N/A	104,1500	6.0003	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.4672	N/A	N/A	92.1300	0.0600	6.0092	92.13	Option 2: A=6.954, B=1344.8, C=216.46
Unidentified Components						4.4780	N/A	NVA.	67.2042	0.7529	0.9547	77.59	
Xylenes (Mized)						0,1337	N/A	N/A	106,1700	0.0700	0.0031	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilon Gasoline RVP 5.99	Sep	69.03	61.28	76.77	61.57	3.5226	N/A	N/A	68.0000			62.50	Option 4; RVP+5.99, ASTM Slope+3
1,2,4-Trimethytoenzere						0.0291	N/A	N/A	120.1600	0.0240	0.0002	120.16	Option 2: A=7.04383, B=1573.287, C=208.56
2,2,4-Trimethylpentane						0.7685	N/A	N/A	114.2300	0.0470	0.0124	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.4923	NVA	N/A	76.1100	0.0120	0.0052	76_11	Option 2: A=6.905, B= 1211.033, C=220.79
Cyclohexane						1.5392	NVA	N/A	84.1600	6.0024	0.0013	84.16	Option 2: A=6.641, 8=1201.53, C=222.65
Ethylbenzene						0,1475	N/A	N/A	106,1700	0.0120	0,0006	106.17	Option 2: A=6.975, B=1424,255, C=213,21
Hexane (-n)						2,4083	N/A	N/A	66.1700	0.0130	0.0108	65.17	Option 2: A=8.876, B=1171.17, C=224.41
Isopropyl benzane						0.0712	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Mathyl alcohol						1.9054	NVA	N/A	32,0400	0.0014	070008	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthelene						0.0023	N/A	N/A	128,1600	6.0030	0,0006	128.16	Option 2: A=6.8181, B=1585.88, C=184.32
Styrene						0.0979	N/A	N/A	104.1500	9.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene						0.4347	N/A	N∕A.	92,1300	9.0600	0.0090	92,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4.2698	N/A	N/A	67.2197	0.7529	0.9555	77_59	
Xylenes (Mixed)						0.1233	N/A	N/A	108.1700	6.6700	0.0030	109,17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon GasoEne RVP 5.99	Oct	64.64	58,13	71.18	61.57	3,2234	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0246	N/A	N/A	120,1900	8.0240	0.0002	120,19	Option 2: A=7.04383, B=1573.267, C=208.58
2.2.4-Trimethylpeniane						0.6800	N/A	N/A	114,2300	6.0470	0.0120	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzane						1.3268	N/A	N/A	76.1100	6.0120	6.0060	78.11	Option 2: A=5.905, B=1211.033, C=220.79
Cyclohexana						1,3720	N/A	NA	B4.1600	6.0024	0.0012	84.18	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						6.1274	N/A	N/A	106.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Henane (-n)						2.1564	N'A	N/A	£5.1700	0.0130	0.0108	66.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyi benzene						0.0607	N/A	N/A	120.2000	0,0015	0.0000	120,20	Option 2: A=8.953, B=1460.793, C=207.78
Methyl alcohol						1.6568	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalens						0.0019	H#A	N/A	128.1600	0.0000	0.0000	125.19	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.0844	N/A	N/A	104.1500	8.0008	0,0006	104.15	Option 2: A=7,14, B=1574.51, C=224.09
Tatuene						0.3809	N/A	N/A	92.1300	0.0600	6800.0	92,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						3.9117	N/A	N/A	67.2476	0.7529	0.9570	77_B9	
Xylenca (Mixed)						0.1062	N'A	N/A	105.1700	6.0700	6.0026	106.17	Option 2: A=7.009, B=1482.268, C=215.11
Equilon Gasoline RVP 12.5	Nov	58.67	54.21	63.53	61.67	6.5099	N/A	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-7 rimethylbenzene						0.0195	NA	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylperstane						0.5765	N/A	N/A	114,2300	Q.0478	0.0055	114,23	Option 2: A=6.81 18, B=1257.84, C=220.74
Benzene						1.1317	N'A	N/A	76_1100	0.0120	6.0027	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohezane						1.1748	t\ V A	N'A	64,1600	0.0024	8.0000	64.18	Option 2: A=6.841, B=1201.53, C=222.65
Ehybenzene						0.1043	N/A	N/A	106,1700	0.0120	0.0003	106.17	Option 2: A=6.975, B= 1424.255, C=213.21
Hexana (-n)						1,8578	N/A	N/A	86,1700	0.0130	0.0049	86.17	Option 2: A=6.876, B=1171.17; C=224.41
teopropyt benzena						0.0490	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=8.963, B=1450.793, C=207.78
Methyl alcohol						1.3915	N/A	N/A	32,0400	0.0014	0.0004	32.04	Option 2: A-7,897, B=1474.08, C=229.13
Naphcheleno						0.0014	N/A	1VA	128.1900	9.0030	0.0000	128_16	Option 2: A=6.8191, B=1585.88, C=164.32
Styteme						0.0690	tv/a	N'A	104,1600	0.0008	0.0000	104.15	Option 2: A=7.14, B=1674.51, C=224.09
Totuene						0.3167	N/A	N/A	B2.1300	0.0600	6.0038	82.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						8.0529	N/A	N/A	62.6222	9.7529	0.9805	77.69	
Xylenes (Mored)	_	_				0.0868	N/A	N/A	108.1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Equilon Gasoline RVP 14.0	Dec	64.98	51.51	58.44	61.57	6.8705	N/A	N/A	61.0000			82,50	Option 4; RVP=14, ASTM Slope=3
1,2,4-TrimeInybenzene						0.9167	N/A	N/A	120.1900	0.0240	0.0001	120,16	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0.5145	N/A	NVA	114,2300	0.0470	0.0049	114.23	Option 2: A=6.8116, B=1257.84, C=220.74
Benzene						1.6143	N/A	N/A	78.1100	0.0120	6.0024	78.11	Option 2: A=8.905, B=1211.033, C=220.79 Option 2: A=8.841, B=1201, 53, C=222, 55
Cyclohexane						1.0556	N/A	N/A	84,1900	0.0024	0.0005	84,15 106,17	Option 2: A=6.841, B=1201.53, C=222.65
Ehylbenzene						0.0909	N/A	N/A	108.1700	0.0120	0.0002	86.17	Option 2: A=5.875, B=1424.255, C=213.21 Option 2: A=5.875, B=1171.17, C=224.41
Hazana (-n)						1.6765	' NVA	N/A	86.1700	0.0130	0.0043	120,20	Option 2: A=6.963, B=1460,793, C=207.78
sopropyi benzene						0.0423	N/A	N/A N/A	120.2000	6.0015 0.0014	0.0003	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol						1.2269	N/A	rvA	32.0400	0.0014	D.ULAS	36.34	Grants, PETART, OPTIMIS, GRADING

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Naphthalens	0.0011 N	ĽA N/A	125,1600	0.0030	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=164.32
Styrena	0.0601 N	UA N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluene	0.2818 N	VA NYA	92.1300	0.0600	0.0033	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unident/ind Components	6.5170 N	VA N/A	60.6584	0.7529	0.9830	77,89	
Xylenes (Mixed)	0.0756 N	VA N'A	106.1700	0.0700	0.0010	108.17	Option 2: A=7.009, B=1462.268, C=215.11
Xylanas (Nixad)	0.0756 N	VA N/A	106.1700	0.0700	0.0010	108.17	Option 2: A=7.009, B=1462.268, C=215.11

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

Stockton Tank 24 - max annual throughput - Internal Floating Roof Tank Stockton, California

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Month:	January	February	March	April	May	June	ylit	August	September	October	November	December
Rim Seal Losses (b):	40.5343	37.9331	40.1627	43,4108	16.8759	20,3382	21.2565	20.8671	19.7350	17.8377	38.8149	40.4285
Seal Factor A (b-molefl-wr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	9.6000	0.6000	0.6000
Seal Factor B (Ib-moleft)-yr (mph)*ri);	0.4000	0,4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Value of Vapor Pressure Function: Vapor Pressure et Daily Average Liquid	9.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0735	0.0722	0.0683	0.0817	0.1450	0.1559
Surface Temperature (pala):	6.8336	6.3968	6.6772	7.0673	3.3880	3.6161	3.7570	3.6975	3.5228	3.2234	8.5099	6.8705
Tank Diameter (II):	65.0000	65.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	ES.0000	85.0000	85.0000 61.0000
Vapor Molecular Weight (Ib/Ib-mole):	61,000	63.0000	63.0000	63.0000	68.0000	68.0000	68.0000	68.0000	68.0000	68.0000	63.0000 1.0000	1,0000
Product Factor:	1,0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	
Withdrawel Losses (Ib):	30,4566	30,4566	30.4566	30.4556	30.4566	30,4558	30.4566	30,4566	30.4568	30,4568	30.4568 1.0000	30.4555 1.0000
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1,0000	1,0000
Effective Column Diameter (4):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1_0000	1.0000		1,568,845,000013	
Net Throughput (gal/mo.):	13,568,845,000013					3,566,845,00001	3,566,845,000013,	20015	0.0015	0.0015	0.0015	0.0015
Shell Clingage Factor (bbl/1000 soft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	5,6000	5.6000	5.6000	5.6000	5,6000
Average Organic Liquid Density (Ib/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	ES.0000	B5,0000	85,0000	85.0000	85,0000
Tank Diameter (ff):	85.0000	65.0000	B5.0000	85.0000	85.0000	85.0000	85.0000	65.000	63.0000	63.0000		
Deck Fitting Losses (Ib):	113.7027	106.4059	112.6604	121.7718	52.9489	57.0508	59.6265	58.5344	55.3587	50.0355	108.8795	113.4061 0.1559
Value of Vapor Pressure Function:	0.1554	0.1417	0.1500	0,1621	0.0653	0.0704	0.0736	0.0722	0.0683	0.0617	0,1450	
Vapor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	68.0000	63.0000	68.0000	68.0000	68.0000	68.0000	68.0000	68.0000	63.0000 1.0000	61.0000 1.0000
Product Factor:	1_0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	143.0600	143.0600
Tol. Roal Filling Lass Fect. (ib-mole/yr):	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0500	143.0600	14330600	1431000
Deck Seam Losses (Ib):	0000.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dock Seem Length (b):	0.0000	0.000	0.0000	9.0000	0.0000	0.0000	9.0000	0.0000	0.000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Longth Factor (20-moterfi-yn);	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(1/soft):	0.0000	0.0000	0.0000	0,0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (h):	85,0000	65.0000	R5.0000	85,0000	85.0000	85.0000	AS.0000	85,0000	65.0000	B5.0000	65.0000	85.0000
Vapor Molecular Weight (b/b-mola):	61,0000	63,0000	63,0000	63,0000	68.0000	68.0000	68.0000	68.0000	68.0000	68.0000	68.0000	61.0000
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 (b):	184.0936	174,7958	183.2797	195.6390	102.2814	107.8456	111.3397	109,8581	105.5603	88.3308	178.1509	184,2913
				·····			Roal Ficing Loss	Eactor				
Roof Fizing/Status				Qu	anciy	KFa(b-mole/y				m	Lossos(8)	
						1.6		0.00		0.00	11,2734	
Access Hatch (24-In: Diam.)/Bohad Cover, G Gauge-Hatch/Sample Well (8-In: Diam.)/Weig		her				0,4		0.02		0.97	3.3116	
Course Well (24-In. Diam.)/Pipe ColStoing	Contra Gast				i	210		0.00		0.00	176.1474	
Ledder Well (38-in, Diam.)/Stiding Cover, Gas					i	56.0		0.00		0.00	394.5701	
Roof Leg (3-in. Diameter)/Adjustable, Center					11	0,4		0.16		0.14	37.9774	
Sample Pipe or Well (24-in, Diam, VSt; Fabric					1	12.0		0.00		0.00	84.5507	
Vacuum Breaker (10-In, Diam.)/Weighted Me	ch. Actuation, Gask.				2	6.2		1.29		0.94	07.3691	
Roof Leg (3-in. Diameter)/Adjustable, Pontoo	n Area, Sock				10	1.2		0.14		0.65	135.2812	
Slotted Guide-Pole/Sample Web Gask Silding	Covr. w. Float,Sleeve,V	Mper			1	11.0	0	9.90		0.89	77_5049	

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Emissions Report - Detail Format Individual Tank Emission Totals

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

Stockton Tank 24 - max annual throughput - Internal Floating Roof Tank Stockton, California

1	Losses(Ds)											
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions							
Equilon Gasoline RVP 5.99	118.91	182.74	333.56	0.00	635.21							
1,2,4-Trimethylbenzene	0.03	4.39	0.08	0.00	4.50							
2,2,4-Trimethylpentane	1.48	8.59	4.16	0.00	14.23							
Benzene	0.73	2.19	2.06	0.00	4.99							
Cyclohexane	0.15	0.44	0.43	0.00	1.02							
Ethylbenzene	0.07	2.19	0.20	0.00	2.47							
Hexane (-n)	1.28	2.38	3.60	0.00	7.26							
Isopropyl benzene	0.00	0.27	0.01	0.00	0.29							
Methyl alcohol	0.11	0.26	0.31	0.00	0.67							
Naphthalene	0.00	0.55	0.00	0.00	0.55							
Styrene	0.00	0.15	0.01	0.00	0.16							
Toluene	1.07	10.96	3.00	0.00	15.04							
Unidentified Components	113.61	137.58	318.70	0.00	569.89							
Xylenes (Mixed)	0.35	12.79	1.00	0.00	14,14							
Equilon Gasoline RVP 12.5	160.32	121.83	449.72	0.00	731.87							
1.2.4-Trimethylbenzene	0.02	2.92	0.04	0.00								
2,2,4-Trimethylpentane	0.89	5.73	2.48	0.00	9.10							
Benzene	0.44	1.46	1.24	0.00								
Cyclohexana	0.09	0.29	0.26	0.00								
Elhylbenzene	0.04	1.46	0.12	0.00	1.62							
Hexane (-n)	0.79	1.58	2.21	0.00	4.56							
Isopropyl benzene	0.00	0.18	0.01	0.00	0.19							
Methyl alcohol	0.06	0.17	0.18	0.00	0.4							
Naphthalene	0.00	0.37	0.00	0.00								
Styrene	0.00	0.10	0.01	0.00	0.10							

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Toluene	0.63	7.31	1.76	0.00	9.69
Unidentified Components	157.18		440.86	0.00	689.74
Xylanes (Mixed)	0.20	8.53	0.56	0.00	9.29
Equilon Gasoline RVP 14.0	80.96	60.91	227.11	0.00	368.98
1,2,4-Trimethylbenzene	0.01	1.46	0.02	0.00	1.49
2,2,4-Trimethylpentane	0.39	2.86	1.08	0.00	
Benzene	0.19	0.73	0.54	0.00	
Cyclohexane	0.04	0.15	0.11	0.00	0.30
Ethylbenzene	0.02	0.73	0.05	0.00	0.80
Hexana (-n)	0.35	0.79	0.97	0.00	2.11
Isopropyi benzene	0.00	0.09	0.00	0.00	0.10
Methyl alcohol	0.03	0.09	0.08	0.00	0.19
Naphthalene	0.00	0.18	0.00	0.00	0.18
Styrene	0.00	0.05	0.00	0.00	0.05
Toluane	0.27	3.65	0.76	0.00	
Unident/fied Components	79.59	45.86	223.25	0.00	348.70
Xylenes (Mixed)	0.08	4.26	0.24	0.00	4.59

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

The stand of the second s

dentification User Identification: City: State: Company: Type of Tank: Description:	Stockton Tank 24 - max daily throughput Stockton California Shell Oil Products US Internal Floaling Roof Tank Storing gasoline with maximum daily throughput (1 turnover/day)
Tank Dimensions	85.00
Diameter (It):	2,226,000.00
Volume (galions):	365.00
	N
Self Supp, Roof? (y/n): No. of Columns:	1.00
Eff. Col. Diam. (ft):	1.00
Paint Characteristics Internal Shell Condition: Shell Color/Shada: Shell Condition Roof Color/Shade: Roof Condition: Rim-Seal System Primary Seal: Secondary Seal	Light Rust White/White Good White/White Good Mechanical Shoe Rim-mounted
Deck Characteristics	
Deck Fitting Category:	Delail
Deck Type:	Welded
Deck Fitting/Status	

Nooi Leg (3-in, DiameteryAcjusteble, Center Area, Sock Sample Pipe or Well (24-in, Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in, Diam.)/Welghted Mech. Actuation, Gask. Roof Leg (3-in, Diameter)/Adjustable, Pontoon Area, Sock Stotted Guide-Pote/Sample Well/Gask Stiding Covr, w. Float, Sleeve, Wiper

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psla)

Quantity

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

Stockton Tank 24 - max daily throughput - Internal Floating Roof Tank Stockton, California

		Daily Liquid Surt. Temperature (deg F)			Liquid Buck Temp	Vapor Pressure (paia)		Vepor MoL	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure	
inture/Component	Month	Avg.	Min,	Max.	(deg F)	Avg.	Min.	Max.	Weight	Fract.	FracL	Weight	Galcutations
guilon Gasoline RVP 14.0	Jan .	65.08	51.40	58.67	61.57	8.8836	N/A	N/A	61_0000			82.50	Option 4: RVP=14, ASTM Slope=3
1,2,4-Trimethybenzene						0.0167	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylpenizne						0.5161	N/A	N/A	114,2300	0_8470	0.0048	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0172	N/A	N/A	76.1100	0.0120	0.0024	78,11	Option 2: A=6.905, B= 1211.033, C=220.79
Cyclohexane						1.0588	N/A	N/A	84,1600	0.0024	0.0005	64.16	Option 2: A=6.841, B=1201.63, C=222.65
Ethylberzene						0.0913	N/A	N/A	106.1700	0.0120	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
lexane (-n)						1.6810	N/A	NA	85.1700	0.0130	0.0043	85.17	Option 2: A=6.676, B=1171.17, C=224.41
sopropyt benzene						0.0424	N/A	N/A	120.2000	0.0015	0.0006	126.20	Option 2; A=6.953, B=1460.793, C=207.78
Asthyl alcohol						1,2320	N/A	N/A	32.0400	0.0014	0.0003	32.04	Option 2: A=7.697, B=1474.08, C=229.13
lapititatione						0.0011	N/A	N/A	128.1600	0.0030	0.0006	128.16	Option 2: A=6.8181, B=1585.88, C=184.32
Styrane						0.0603	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.08
Toluzno						0.2827	N/A	N/A	92,1300	0.0600	0.0033	92.13	Option 2: A=6,954, B=1344.8, C=219.48
Inidentified Components						8.5331	N/A	N/A	60.6580	0.7529	0.9630	77.89	
Kylenes (Mitted)						0.0759	N/A	N/A	105.1700	0.0700	0.0010	106.17	Option 2: A=7.009, B=1452.266, C=215.11
action Gascine RVP 12.5	Feb	57.96	53,17	92,75	61.57	6,3968	Ń'A	NVA	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
2.4-Trimethylbenzane						0.0166	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2.4-Trimethybertane						0.5615	N/A	N/A	114,2300	9.0470	0.0054	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Senzone					•	1,1033	ŇA	N/A	78,1100	0.0120	0.0027	78.11	Option 2: A=6.905, B=1211.033, C=220.79
lyclohexane						1.1459	N/A	N/A	84.1600	0.0024	0.0006	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Unibenzena						0.1010	N/A	NA	105.1700	0.0120	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
texana (-n)						1.8140	Ń/A	N/A	05,1700	0.0130	0.0048	68.17	Option 2: A=6.876, B=1171.17, C=224.41
sopropyl benzene						0.0473	N/A	N/A	120,2000	0.0015	9.0000	120.20	Option 2: A-6.863, B- 1460.793, C-207.70
Methyl alcohol						1,3519	N/A	N/A	32.0400	0.0014	9.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
taphthalene						0.0019	N/A	N/A	128,1900	0.0006	0.0000	128.16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.0668	NA	N/A	104.1500	0.0006	0.0006	104.15	Option 2: A=7,14, B=1574.51, C=224.09
Totuene						0.3097	N/A	N/A	92,1300	0.0600	0.0038	92.13	Option 2: A=8.954, B=1344.8, C=219.48
Unidentified Components						7,9164	N/A	NVA	62.6258	0.7529	0.9807	77,69	
Kylenes (Mixed)						0.0841	N/A	N/A	106,1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1462.266, C=215.11
guilon Gesoline RVP 12,5	Mar	60.22	54.38	66.07	61.57	6.6772	N/A	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
2,4 Trimethybenzene						0.0206	N/A	N/A	120.1900	0.0240	0.0001	120.19	Option 2; A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane						0.5894	N/A	N/A	114.2300	0.0470	0.0055	114.23	Option 2; A=6.8110, B=1257.84, C=220.74
Benzene						1,1749	N/A	N/A	78.1100	0.0120	0.0028	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Syclohezane						1.2186	NVA	N/A	84,1600	0.0024	0,0008	84.15	Option 2: A=6.641, B=1201.53, C=222.65
Ediylbenzene						0.1094	Î₩A	N/A	106.1700	6.0120	0.0003	105.17	Option 2: A=6.975, B=1424.255, C=219.21
lezaño (-n)						1,9242	N/A	N/A	66.1700	0.0130	0.0049	86.17	Option 2: A=6.876, B=1171, 17, C=224.41
second benzene						0.0515	N/A	N/A	120,2000	0.0015	0.0006	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Actinyi alcohol						1,4520	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7.897, 8 = 1474.08, C=229.13
Vaphihalene						0.0015	N/A	N/A	128.1600	0.0008	0.0008	128.15	Option 2; A=6.8181, B=1585.86, C=184.32
Styrane						0.0724	N/A	N/A	104.1600	0.0006	00000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.3324	NA	N/A	92.1300	9.0600	0.0039	92.19	Option 2: A=6.954, B=1344.8, C=218.48
Unidentified Components						6.2562	N/A	N/A	92,6168	0.7529	0.9803	77.89	

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Xylenes (Mixed)						0.0911	N/A	N/A	106.1700	6.0700	0.0013	105.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gasoline RVP 12.5	Apr	63.26	55,98	70.54	61.67	7.0673	N/A	N/A	63.0000	0.0700	0.0013	82.50	Option 4: RVP-12.5, ASTM Slope-3
1,2,4 Trimetrybenzene	~ ~	0020	33.80	10.54	0.101	0.0233	N/A	N/A	120,1900	0.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimetryipentane						0.6539	NA	N/A	114.2300	0.0470	0.0057	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.2775	NVA	N/A	78.1100	0.0120	0.0028	78,11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3224	N/A	N/A	64,1600	0.0024	0.0005	84,16	Option 2: A=6.641, B=1201.53, C=222.65
Etylbenzene						0.1215	N/A	N/A	106.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Herane (-n)						2.0815	N/A	N'A	68.1700	0.0130	0.0050	86.17	Option 2: A=8.876, 8=1171.17, C=224.41
Isopropyl benzene						0.0577	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl alcohol						1.5969	N/A	N/A	32 0400	0.0014	0.0004	32.04	Oction 2: A=7.897, B=1474.08, C=229.13
Naprchalane						0.0017	N/A	N/A	128,1600	0.0030	0.0000	128,16	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene						0.0804	N'A	N/A	104,1500	0.0008	0.0000.0	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tchuene						0.3651	N/A	N/A	92,1300	0.0630	0.0041	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						8,7369	N/A	N/A	62.6045	0.7529	0.9797	77.89	•
Xylenes (Mirad)						8.1D13	N/A	N/A	108.1700	0.0700	0.0013	106.17	Option 2: A=7.009, B=1462.255, C=215.11
Equilon Gasoline RVP 5.99	May	67,10	58,98	75.36	61,57	3.3880	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimetrybenzone				-		0.0270	N/A	N/A	120,1900	0.0240	0.0002	120.16	Option 2: A=7.04383, B=1573.267, C=208.56
2.2.4-Trimethylpeniane						0.7284	N/A	N/A	114,2300	0.0470	0.0123	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.4173	N/A	N/A	78,1100	6.0120	0.0061	76.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexana						1,4635	N/A	ŇA	84.1600	0.0024	0.0013	84.18	Option 2: A=6.841, B=1201.53, C=222.65
Einylbenzene						0.1384	N/A	N/A	108.1700	6,0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.2945	N/A	N/A	B5.1700	0.0130	0.0107	86,17	Option 2: A=5.876, B=1171.17, C=224.41
Isopropyl benzane						0.0664	N/A	N/A	120,2000	0.0015	0.0000	120.20	Option 2: A=8.963, B=1460.793, C=207.78
Methyl alcohol						1,7968	N/A	N/A	32,0400	0.0014	0.0009	32.04	Option 2: A=7,897, D=1474.00, C=229.13
Naphshalane						0.0021	N/A	N/A	128,1600	0.0030	0.0000	128,16	Option 2: A=6.0161, B=1585.86, C=184.32
Styrene						0.0917	N/A	N/A	104,1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Tokiene						0.4103	N/A	N/A	82,1300	0.0600	0.0088	92.13	Option 2: A=8.954, B=1344.8, C=219.48
Unidentified Components						4,1089	N/A	N/A	57.2321	8,7529	0.9562	77.89	
Xylenes (Mixed)						0.1155	N/A	N/A	106,1700	0.0700	0.0029	105.17	Option 2: A=7.009, B=1462.265, C=215.11
Equilon Gasoline RVP 5.99	Jun	70.33	61.45	79.22	61.57	3.6161	N/A	₩A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1.2.4-Trimethylbenzene			••••			0.0306	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpenlane						0.7967	N/A	N/A	114.2300	6,0470	0.0128	114.23	Option 2: A=8.0118, B=1257.84, C=220.74
Benzone						1.5449	N/A	N⊮A	78.1100	0.0120	0.0052	78.11	Option 2: A=6.905, B=1211.033, C=220.78
Cyclohexane						1.5922	N/A	N/A	84,1600	0.0024	0.0013	84.16	Option 2: A=8.841, B=1201.53, C=222.65
Ethybanzane						0.1542	N/A	N/A	106,1700	0.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.4880	N/A	N'A	86.1700	0.0130	0.0109	86.17	Option 2: A=5.876, B=1171,17, C=224.41
Isopropyl benzene						0.0746	N/A	N/A	120.2000	0.0015	0.0000	120.20	 Option 2: A=6.963, B=1450.763, C=207.78
Methyl alcohol						1,9820	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, 8=1474.08, C=229.13
Naphthalene						0.0025	N/A	N/A	128.1600	0.0030	6.0008	128.16	Option 2: A=6.8181, B=1585.68, C=164.32
Styrene						0.1023	N/A	N/A	104.1500	0.0008	6.0000	184.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.4520	N/A	N/A	62,1300	0.0600	6.0091	92.13	Option 2: A=6.954, 8=1344.8, C=219.48
Unidentified Components						4,3817	N/A	N/A	67.2114	0.7529	0.9551	77.89	
Xylenes (Mixed)						8.1258	N/A	N'A '	106,1700	0.0700	0.0030	106,17	Option 2: A=7.009, B=1462.265, C=215.11
Equilon Gasofine RVP 5.99	است	72.25	63.02	81,48	61_57	3.7570	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2.4-Trimethylberizene						0.0329	N/A	N/A	120.1000	6.0240	0.0003	120.19	Option 2: A=7.04383, B=1573.257, C=208.58
2,2,4-Triznethylpeniane						0.8398	N/A	N/A	114,2300	6.0470	0.0127	114.23	Option 2: A=6.6118, B=1257.64, C=220.74
Banzene						1,6250	N/A	N/A	78,1100	0.0120	0.0063	78.11	Option 2: A=6.905, 8=1211.033, C=220.79
Cyclohoxane						1.6728	N/A	N/A	64.1600	0.0024	0.0013	84.16	Option 2: A=6.041, B=1201.53, C=222.65
EDybenzene						0.1842	N/A	N/A	108.1700	6.0120	0.0006	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Haxane (-ri)						2.6068	N/A	N/A	B6.1700	0.0130	0.0110	85.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyt benzene						0.0798	N/A	N/A	120.2000	6.0015	0.0000	120.20	Option 2: A=6.963, B=1460.783, C=207.78
Methyl alcohol						2.0992	N/A	N/A	32.0400	6.0014	0.0009	32.04	Option 2: A=7.897, 8=1474.08, C=229.13
Naphthalene						8.0027	N/A	NA	120.1600	0.0030	0.0000	128.16	Option 2: A=6.8161, B=1585.86, C=184.32
Styrene						0,1091	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluzne						0.4784	N/A	N/A	62.1300	6.0600	0.0093	62.13	Option 2: A=0.954, B=1344.8, C=218.48
Unidentified Components						4.5501	N/A	N/A	67.1990	6.7529	0.9544	77.89	A
Xylenes (Mxad)	_	_				0.1373	N/A	N/A	108.1700	0.0700	0.0031	106.17 82.50	Option 2: A=7,009, B=1462,266, C=215.11
Equiton Gasoline RVP 5.99	Aug	71.45	62.84	60.06	61.57	3.6975	N/A	N/A	68.0000			120.19	Option 4; RVP=5.99, ASTM Stope=3 Option 2: A=7.04383, B=1573.267, C=208.55
1,2.4-Trimethylbenzone						0.0019	N/A	N/A	120.1900	0.0240 6.0470	0.0003 8.0127	120.19	Option 2: A=6.8118, B=1257.84, C=220.74
2,2,4-TrineBylpenizne						0.8214	N/A	N/A N/A	114,2300 78,1100	6,0470	0.0053	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Berticce						1.5910	N/A	R/A	70.1100	A10157	0.0003	10.11	where a successing on the property for every state

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Cyclohexane						1,6386	N/A	N/A	84.1600	0.0024	0.0013	B4.16	Option 2: A=8.841, B=1201.53, C=222.65
Ehybenzena						0.1599	N/A	N/A	105.1700	0.0120	0.0006	106.17	Option 2: A=6.975, B= 1424.255, C=213.21
Hexana (-n)						2.5578	N/A	N/A	85.1700	0.0130	6.0109	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isoprapyi benzene						0.0776	N/A	N/A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.953, B=1460.783, C=207.78
Mechyl alcohol						2.0494	N/A	N/A	32.0400	0.0014	0.0009	32.04	Option 2: A=7.897, 8=1474.08, C=229.13
Naphthalene						0.0026	N'A	NVA	128.1600	0.0030	0.0000	128.16	Option 2: A=6.8181, 8=1585.86, C=184.32
Styrene						0.1062	NA	N/A	104,1500	0.0008	0.0000	104,15	Option 2: A=7,14, 8=1574.51, C=224.09
Toluene						0.4672	N/A	N/A	82.1300	0.0600	9.0092	92.13	Option 2: A=6.954, B=1344.8, C=219.49
Unidentified Components						4.4790	N/A	NVA.	67.2042	0.7529	6.9547	77.89	
Xylenes (Minut)						6,1337	N/A	N/A	106,1700	0,0700	0.0031	105.17	Option 2: A=7.009, B=1462.265, C=215.11
Equilon Gasoline RVP 5.99	Sep	69.03	61.28	76,77	61.57	3.5226	N/A	N/A	68.0000			82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-Trimethybenzane						0.0291	N/A	N/A	120.1900	0.0240	0.0002	120.19	Option 2; A=7.04383, 8=1573.267, C=208.58
2,2,4-Trimethylpentane						0.7685	N/A	N/A	114.2300	9.0470	6.0124	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Genzene						1,4923	N/A	N/A	78.1100	0.0120	0.0062	76.11	Option 2; A=6.905, B=1211.033, C=220.79
Cyclohexane						1.5392	N/A	N/A	B4.1600	0.0024	9.0013	84,16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1476	N/A	N/A	106.1700	9.0120	0.0006	106,17	Option 2: A=6.975, 8=1424.255, C=213.21
Hexane (-n)						2.4063	N/A	N/A	66.1700	0.0130	0.0108	86,17	Option 2: A=6.876, B=1171,17, C=224.41
Isopropyl benzene						0.0712	N/A	N/A	120.2000	9.0015	0.0000	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Methyl alcohol						1.9054	N/A	Ň/A	32,0400	0.0014	0.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphshalene						0.0023	N/A	N/A	128,1600	0.0030	0.0000	128,18	Option 2: A=8.8191, 8=1585.88, C=184.32
Styrene						0.0979	NA	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluena						0.4347	NVA.	N/A	92,1300	0.0600	0.0090	82,13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						4,2698	NA	IVA	67.2197	9.7529	0.9555	77.89	
Xylenes (Mixed)						0.1233	N/A	N/A	106,1700	0.0700	0.0030	105.17	Option 2: A=7.009, B=1462.268, C=215.11
Equilon Gaseline RVP 5.89	Oct	64,64	58.13	71,16	61.57	3.2234	N/A	N/A	68.0000	02/00	0.000	82.50	Option 4: RVP=5.99, ASTM Slope=3
1,2,4-1 rimethylbenzene	<u>u</u>	04,04	30.13	<i>*</i> 1,10	121	0.02<6	N/A	N/A	120,1900	0.0240	0.0002	120.19	Option 2; A=7.04383, 8=1573.267, C=208.56
						0.6800	N/A	N/A	114,2300	0.8470	0.0120	114.23	Option 2: A=6.8119, B=1257.84, C=220.74
2.2.4-Trimethylpontane							N/A	N/A	78,1100	0.0120	0.0050	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Benzene						1,3266	N/A	NVA	84,1600	0.0024	0.0012	B4.16	Option 2: A=6.841, B=1201.53, C=222.65
Cyclohexana						1.3720					0.0009	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Ethylbenzene						6.1274	N/A	N/A	106.1700	0.0120			Option 2: A=8.876, B=1171.17, C=224.41
Hexane (-n)						2.1584	N/A	N/A	88.1700	9.0130	6.0106	B6.17	
Isopropyl benzene						0.0607	N/A	N/A	120.2000	0.0015	9.0000	120.20	Option 2: A=8.963, B=1460.793, C=207.78
Methyl alcohol						1.5650	N/A	N/A	32.0400	0.0014	9.0009	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0018	N/A	N/A	128.1600	0.0030	0.0008	128.16	Option 2: A=6.8181, 8=1585.86, C=184.32
Styrene						0,0844	N/A	N/A	184.1500	0.0008	0.0000	104.15	Option 2: A=7,14, B=1574.51, C=224.09
Toluene						0.3609	N/A	N⁄A	82,1300	0.0600	0.0086	82.13	Option 2: A=6.954, B=1344.8, C=219.48
UnidentIfied Components						3.9117	N'A	N/A	67.2479	0.7529	0.9570	77.89	
Xylenes (Mixed)						0.1052	N/A	N/A	106.1700	6.0700	0.0028	106.17	Option 2: A=7,009, B=1462,266, C=215.11
Equiton Gasoline RVP 12.5	Nov	58.67	54.21	ស. 53	91.57	6.5099	N/A	N/A	63.0000			82.50	Option 4: RVP=12.5, ASTM Slope=3
1,2,4-Trimethybenzene						0.0195	N/A	N'A	120.1900	9.0240	6.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2.4 Trimethylponizne						0.5765	N/A	N/A	114.2300	0,0470	0.0055	114.23	Opton 2: A=0.8118, B= 1257.84, C=220.74
Benzene						1.1317	N/A	N/A	78,1100	8.0120	0.0027	70,11	Option 2: A=6.905, B=1211.033, C=220.78
Cyclohexane						1,1745	N/A	N/A	64.1600	9.0024	0.0008	B4 .16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1043	N/A	N/A	106.1700	0.0120	0.0003	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1,8578	N/A	N/A	85.1700	0.9130	9.0049	\$6.17	Option 2: A=6.876, B= 1171.17, C=224.41
Isopropyl benzene						0.0490	N/A	N/A	120,2000	0.0015	9.0000	120.20	Option 2: A=6.963, B=1460.733, C=207.78
Methyl alcohol						1,3915	N/A	N/A	32.0400	0.0014	0.0004	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Naphthalene						0.0614	N'A	N/A	128.1600	9.0030	0.0000	126.16	Option 2: A=6.8181, B=1585.86, C=184.32
Slyrena						0.0690	N'A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Toluona						0.3187	N/A	N/A	92.1300	0.0600	0.0038	82.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidertified Components						8.0529	N'A	N/A	62.6222	0.7529	6.9506	77_89	
Xylenes (Mixed)						0.0658	N/A	N/A	108.1700	0.0700	0.0012	106.17	Option 2: A=7.009, B=1462.255, C=215.11
Equion Gasoline RVP 14.0	Dec	54.98	51.51	58.44	61,57	6.8705	N/A	N/A	81.0000	•		82.50	Option 4: FVP=14, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0167	N/A	N/A	120.1900	9.0240	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.58
2,2,4-Trimethylpentane						0.5145	N/A	N/A	114.2300	0.0470	0.0048	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.0143	NA	N/A	78,1100	0.0120	0.0024	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.0556	N/A	N/A	B4.1600	0.0024	0.0005	64.19	Option 2: A=8.841, 8=1201.53, C=222.65
Ehylbenzene						0.0909	N/A	N/A	108.1700	0.0120	0.0002	106.17	Option 2: A=6.975, 8=1424.255, C=213.21
Herzano (-n)						1.6765	N/A	N/A	86.1700	0.8130	0.0043	86.17	Option 2: A=6.878, B=1171.17, C=224.41
Isopropyi benzene						0.0423	N/A	N⁄A	120.2000	0.0015	0.0000	120.20	Option 2: A=6.963, 8=1460.793, C=207.78
Mathyl acohol						1.2289	N'A	N/A	32.0400	9.0014	0.0003	32.04	Option 2: A=7.697, B=1474.08, C=229.13

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Naphthalene	0.0011	N/A	N/A	128,1600	0.0030	0.0000	129.18	Option 2: A=6.8181, B=1585.86, C=184.32
Styrene	0.0601	N/A	N/A	104.1500	0.0008	0.0000	104.15	Option 2: A=7.14, B=1574.51, C=224.09
Taluena	0.2918	N/A	N/A	62.1300	0.0600	0.0033	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unident/Tied Components	8,5170	N/A	N/A	60.6584	0.7529	0.9830	77.89	
Xylenas (Mbred)	0.0756	N/A	N/A	106.1700	0.0700	0.0010	106.17	Option 2: A=7.009, B=1482.266, C=215.11

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

Stockton Tank 24 - max daily throughput - Internal Floating Roof Tank Stockton, California

Month:	January	February	March	April	May	June	, July	August	September	October	November	December
Rim Seal Losses (b):	40.5343	37.9331	40.1627	43,4105	18,8759	20,3382	21,2565	20.6671	19.7350	17,8377	38.6149	40.4288
Seal Factor A (ID-mole TI-yr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.003.0	0.6000	0.6000	0.6000	0.6000	0.6000
Seal Factor B (Ib-mole/II-yr (mph)*n);	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0,4000	0.4000	0.4000	0.4000	0.4000
Value of Vapor Pressure Function: Vapor Pressure at Daily Average Liquid	0.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0736	0.0722	0.0683	0.0617	0.1450	0.1556
Surface Temperature (paia):	6.8836	6.3968	6.6772	7.0673	3.3880	3.6161	3,7570	3.6975	3.5226	3.2234	6.5099	6.870
Tank Diameter (h):	85.0000	85.0000	85.0000	85.0000	85.0000	65.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.000
Vapor Molecular Weight (Ib/Ib-mole):	61.0000	63.0000	63.0000	63.0000	0000.83	0000.83	68.0000	68.0000	68.0000	68.0000	63.0000	61.0000
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
Muhdrawal Losses (D):	151,9984	151_9984	151.9984	151.9994	151.9984	151.9984	151.9984	151.9984	151.9984	151.9984	151.9984	151.998
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	1.000
Effective Column Diamater (#): Net Throughout (gat/mg.):	1.0000 67,707,500.000067,	1.0000	1.0000	1_0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Sheft Clingage Factor (bb/1000 upfi):	0.0015	0.0015	0.0015	,707,500000087. 0.0015	0.0015	7,707,500.000087 0.0015	0.0015	0.0015	,707,500,000067, 0,0015	0.0015	707,500,000087, 0.0015	0.001
Average Organic Liquid Density (bogal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.600
Tank Diameter (ft):	85.0000	85.0000	65.0000	85,0000	85.0000	65.0000	65,0000	85.0000	85.0000	65.0000	85.0000	85,000
Deck Figing Losses (Ib):	113.7027	108,4059	112,6604	121.7716	52,9489	57.050B	59,6266	58,5344	55.3587	50.0365	108,8795	113,406
Value of Vapor Pressure Function:	0.1564	0.1417	0.1500	0.1621	0.0653	0.0704	0.0736	0.0722	0.0683	0.0617	0.1450	0.155
Vapor Molecular Weight (Ib/b-mole):	61,0000	63.0000	63,0000	63,0000	68,0000	68,0000	68.0000	0000.63	68.0000	68.0000	63.0000	61.000
Product Factor:	1.0000	1,0000	1,0000	1.0000	1.0000	1.0000	1.0000	1.0000	1,0000	1.0000	1.0000	1.000
Tot. Roof Fitting Loss Fect. (Io-mole/yr):	143.0600	143.0500	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.0600	143.060
Deck Seam Losses (b):	0.000.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000
Deck Seam Length (It); Deck Seam Loss per Unit Length	0.0000	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.000
Factor (Ib-mole/fl-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	0.000
Deck Seem Length Factor(ft/soft):	0.0000	0000.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000
Tank Diameter (h):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.000
Vapor Molecular Weight (Ib/Ib-mole): Product Factor:	61.0000 1.0000	63.0000 1.0000	63.0000 1.0000	63.0000 1.0000	68.0000 1.0000	68.0000 1.0000	68.0000 1.0000	68.0000 1.0000	68.0000 1.0000	68.0000 1.0000	53.0000 1.0000	61.000 1.000
Talaki											000 6000	
Total Losses (b):	308.2355	295.3374	304.8215	317.1808	223.8232	229.3874	232.8816	231.3999	227.0922	219.8728	299.6828	305.833
							Roof Fitting Loss					
Roof Fitting/Status				Qu	antay	KFa(b-mole/yr)	KFb(lb-mole/()	t mph*a))			Losses(b)	
Access Hatch (24-in. Diam.)/Bobed Cover, G	acketed				1	1.60		0.00			11,2734	
Bauge-Hatch/Sample Well (8-in. Diam.)/Weig	hted Mech. Actuation, Ga	ssie,			i	0.47		0.02		.07	3.3116	
Column Well (24-In, Diam.)/Pipe Col-Stiding	Cover, Gesk.				1	25.00		0.00	Ċ	.00	176.1474	
Ladder Well (36-In. Diam.)/Siding Cover, Gas					1	56.00		0.00		.00	394.5701	
Roof Leg (3-in. Diameter)/Adjustable, Center					17	0,49		0.16		. 14	37.9774	
Sample Pipe or Well (24-In, Diam.)/SE) Febric					1	12.00		0.00		000	84,5507	
Vacuum Breaker (10-In. Diam.)/Weighted Me					2	6.20		1.20		194	67.3691	
Roo: Leg (3-In. Diameter/VAdjustable, Pontoo Slotted Quide-Pole/Sample Well/Gask Stiding	n Avea, 500X Court of Electric Views W				16	1.20		9,14 9,90).65).89	135.2812 77.5048	
NOTO CHOS. LOG SELEN MED CITY SUCH	10041, W. FERLIGISONE, VI	daria.			1	11.00		H.W.		.67	17.3046	
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TANKS 4.0.9d

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Emissions Report - Detail Format individual Tank Emission Totals

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

Stockton Tank 24 - max daily throughput - Internal Floating Roof Tank Stockton, California

			Losses(ibs)		
Components	Rim Seal Loss	Withdrawi Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Equilion Gasoline RVP 5.99	118.91	911.99	333.56	0.00	1,364.46
1,2,4-Trimethylbenzene	0.03	21.89	0.08	0.00	22.00
2,2,4-Trimethylpentane	1.48	42.86	4.16	0.00	48.50
Benzene	0.73	10.94	2.06	0.00	13.74
Cyclohexane	0.15	2.19	0.43	0.00	2.77
Ethylbenzene	0.07	10.94	0.20	0.00	11.22
Hexane (-n)	1,28	11.86	3.60	0.00	16.74
Isopropyl benzene	0.00	1.37	0.01	0.00	1.38
Methyl alcohol	0.11	1,28	0.31	0.00	1.69
Nephihelene	0.00	2.74	i 0.00	0.00	2.74
Styrene .	0.00	0.73	0.01	0.00	0.74
Toluene	1.07	54.72	3.00	0.00	58.80
Unidentified Components	113.61	686.64	318.70	0.00	1,118.95
Xylenes (Mixed)	0.35	63.84	1.00	0.00	65.19
Equilon Gasoline RVP 12.5	160.32	607.89	449.72	0.00	1,218.03
1,2,4-Trimethylbenzene	0.02	14.59	0.04	0.00	14.65
2,2,4-Trimethylpontane	0.89	28.58	2.48	0.00	31.95
Benzene	0.44	7.30	1.24	0.00	8.98
Cyclohexane	0.09	1.46	0.26	0.00	1.81
Ethylbenzene	0.04	7.30	0.12	0.00	7.45
Hexane (·n)	0.79	7.90	2.21	0.00	10.90
Isopropyl benzene	0.00	0.91	0.01	0.00	0.92
Methyl alcohol	0.06	0.85			
Naphthalene	0.00	1.82	0.00		1.82
Styrene	0.00	0.49	0.01	0.00	0.49

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Toluene	0.63	36.48	- 1:76	0.00	38.86
Unidentified Components	157.16	457.76	440.86	0.00	1,055.78
Xylenes (Mixed)	0.20	42.56	0.56	0.00	43.32
Equilon Gasoline RVP 14:0	80.96	304.00	227.11	0.00	612.07
1,2,4-Trimethylbenzeno	0.01	7.30	0.02	0.00	7.32
2,2,4-Trimethylpentane	0.39	14.29	1.08	0.00	15.76
Benzene	.0,19	3.65	0.54	0.00	4.39
Cyclohexane	0.04	0.73	0.11	0.00	0.88
Ethylbenzene	0.02	3.65	0.05	0.00	3.71
Hexane (-n)	0.35	3.95	0.97	0.00	5.27
Isopropyl benzene	0.00	0.46	0.00	0.00	0.46
Methyl alcohol	0.03	0.43	0.08	0.00	0.53
Naphthalene	0.00	0.91	0.00	0.00	0.91
Styrene	0.00	0.24	0.00	0.00	0.25
Totuene	0.27	1B.24	0.76	0.00	19.27
Unidentified Components	79.59	228.88	223,25	00.00	531.72
Xylenes (Mixed)	0.08	21.28	0.24	0.00	21.60

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TANKS 4.0.9d Emissions Report - Detail Format Total Emissions Summaries - All Tanks in Report

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

Tank Identification				Losses (Ibs)
Stockton Tank 19 - max daily throughput	Shell Oil Products US	Internal Floating Roof Tank	Stockton, California	3.072.78
Stockton Tank 19 post-project ann throughput	Shell Oil Products US	Internal Floating Roof Tank	Stockton, Calilornia	2,698.79
Stockton Tank 19 pre-project ann throughput	Shell Oil Products US	Internal Floating Roof Tank	Stockton, Calitornia	2,395.08
Stockton Tank 24 - max annual throughput	Shell Oil Products US	Internal Floating Roof Tank	Slockton, California	1,736.06
Stockton Tank 24 - max dally Ihroughput	Shell Oil Products US	Internal Floating Roof Tank	Stockton, California	3,194.56
Total Emissions for all Tanks:				13,097:26

Appendix IV Compliance Certification



RECEIVED

SEP 1 0 2013

September 9, 2013

SJVAPCD NORTHERN REGION

Mr. Rupi Gill San Joaquin Valley Air Pollution Control District 4800 Enterprise Way Modesto CA 95356-8718

Subject: Compliance Statement for Equilon Enterprises LLC dba Shell Oil Products US

Dear Mr. Gill:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Equilon Enterprises LLC dba Shell Oil Products US (Shell) is providing this compliance statement regarding its proposed project at the Stockton bulk loading terminal (Project Number N-1123247).

All major stationary sources in California owned or operated by Shell, or by any entity controlling, controlled by, or under common control with Shell, and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include one or more of the following facilities:

Facility	Facility ID	City of Operation	Air Quality Management District
West Sacramento Terminal	00046	West Sacramento	Yolo-Solano Air Quality Management District
Martinez Terminal	11956	Martinez	Bay Area Air Quality Management District
Signai Hiil Terminal	116931	Signal Hill	South Coast Air Quality Management District
Van Nuys Terminal	800369	Van Nuys	South Coast Air Quality Management District
Colton Terminal	117225	Bloomington	South Coast Air Quality Management District
Carson Terminal	800372	Carson	South Coast Air Quality Management District
Mormon Island Terminal	117560	Wilmington	South Coast Air Quality Management District
Coalinga Station	C-1234	Coalinga	San Joaquin Valley Air Pollution Control District
Emidio Station	S-83	Mettler	San Joaquin Valley Air Pollution Control District
Bakersfield Pump Station	S-1413	Bakersfield	San Joaquin Valley Air Pollution Control District

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Please contact me if you have any questions regarding this certification.

Sincerely,

Ame C. Ande

Anne C. Anderson General Manager, Supply & Distribution -- US

San Joaquin Valley Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION

[] MINOR PERMIT MODIFICATION

[] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Equilon Enterprises, LLC dba Shell Oil Products US	FACILITY ID: N- 758
1. Type of Organization: [x] Corporation [] Sole Ownership [] Government [] Pa	artnership []Utility
2. Owner's Name:	
3. Agent to the Owner:	

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

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

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



(A)

Corrected information will be provided to the District when 1 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:

9-5-13

Date

Signature of Responsible Official

Anne C. Anderson (for Project #N-1123247)

Name of Responsible Official (please print)

General Manager, Supply & Distribution – US

Title of Responsible Official (please print)

Appendix V Risk Management Review Summary

San Joaquin Valley Air Pollution Control District *REVISED* Risk Management Review

То:	Jag Kahlon – Permit Services
From:	Yu Vu – Technical Services
Date:	November 18, 2013
Facility Name:	Equilon Enterprises LLC
Location:	3515 Navy Dr, Stockton, CA
Application #(s):	N-758-4-5, -13-9, -14-4, -16-0
Project #:	N-1123247

A. RMR SUMMARY

RMR Summary						
Categories	Tank (Unit 4-5)	Vapor Recovery System (Unit 13-9)	Tank (Unit 14-4)	Tank (Unit 16-0)	Project Totals	Facility Totals
Prioritization Score	0.21	3.97	0.03	1.24	>1.0	>1.0
Acute Hazard Index	0.00	0.00	0.00	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.00	0.00	0.00	0.00
Maximum Individual Cancer Risk (10 ⁻⁶)	0.06	1.91	0.01	0.15	2.13	2.13
T-BACT Required?	No	Yes	No	No		
Special Permit Conditions?	No	Yes	No	No	•	- -

Proposed Permit Conditions

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

Units # 4-5, 14-4, and 16-0

No special conditions are required.

Unit # 13-9

T-BACT is required for this unit because of emissions of Benzene, which is a VOC. In accordance with District policy, BACT for this unit will be considered to be T-BACT.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 11, 2013, to perform a Risk Management Review for a proposed modification to three (3) gasoline/diesel/ethanol storage tanks (units 4-5, 14-4, and 16-0) and one vapor recovery system (unit 13-9). The applicant is proposing to increase the throughput of unit 4-5 from 1.25 million gallons to 7.56 million gallons, allow storage of diesel or denatured ethanol in unit 14-4, allow storage of gasoline or denatured ethanol in unit 16-0, and to increase annual throughput on unit 13-9 from 123,733,750 gallons to 196,000,000 gallons, with no increase in daily throughput.

This project also requires that Technical Services perform an Ambient Air Quality Analysis (AAQA) due to a public notice requirement. However, since this project only involves VOC emissions, an AAQA was not performed, because there are currently no standards by which to evaluate VOC emissions against.

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. Emissions calculated using the District's profile for "Oilfield Fugitives - Heavy Crude Oil," were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Stockton 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 13-9				
Source Type	Point ¹	Location Type	Urban	
Stack Height (m)	6.401	Closest Receptor (m)	~150	
Stack Dlameter. (m)	0.101	Type of Receptor	Residential	
Stack Exit Velocity (m/s)	17.499	Max Hours per Year	8760	
Stack Exit Temp. (°K)	297.039			

' Capped

Analysis Parameters Unit 4-5					
Source Type	Area	Location Type	Urban		
	7.32	Closest Receptor (m)	~190		
Radius (m)		Type of Receptor	Business		
Release Height (m)	9.14	Pollutant Type	VOC		
and the second		Emission Rate (g/sec-m ²)	0.00594		

		arameters 14-4	
Source Type	Area	Location Type	Urban
	9.144	Closest Receptor (m)	~150
Radius (m)		Type of Receptor	Business
Release Height (m)	12.19	Pollutant Type	VOC
		Emission Rate (g/sec-m ²)	0.00381

Equilon Enterprises LLC, Project # N-1123247 Page 3 of 3

Analysis Parameters Unit 16-0					
Source Type	Area	Location Type	Urban		
Radius (m)	12.95	Closest Receptor (m)	~120		
		Type of Receptor	Business		
Relsase Height (m)	17.68	Pollutant Type	VÔC		
		Emission Rate (g/sec-m ²)	0.0019		

ill. Conclusion

<u>Unit 13-9</u>

The acute and chronic indices are below 1.0 and the cancer risk associated with unit N-758-13-9 is greater than 1.0 in a million, but less than 10 in a million. In accordance with the District's Risk Management Policy, the project is approved with Toxic Best Available Control Technology (T-BACT).

Units 4-5, 14-4, and 16-0

The acute and chronic indices are below 1.0 and the cancer risk factors associated with these units are less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project 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 proposed 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.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Priorilization score
- E. Facility Summary

Appendix VI Permits to Operate N-758-4-4, '-13-8 and '-14-3

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-758-4-4

EQUIPMENT DESCRIPTION:

ONE 504,000 GALLON (12,000 BBL) ABOVEGROUND INTERNAL FLOATING ROOF GASOLINE/DENATURED ETHANOL STORAGE TANK #19 WITH A PRIMARY MECHANICAL SHOE TYPE SEAL AND SECONDARY RIM-MOUNTED WIPER SEAL

PERMIT UNIT REQUIREMENTS

- 1. VOC emissions from this tank shall not exceed 14.1 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. Fugitive VOC from valves, flanges, connector, pump seals etc associated with this tank shall not exceed 0.2 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The daily throughput of the organic liquid shall not exceed 504,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The monthly throughput of the organic liquid shall not exceed 1,250,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 5. True vapor pressure (TVP) of the liquid stored in this tank shall not exceed 8.7 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The permittee shall determine TVP and the temperature of the organic liquid stored on monthly basis. [District Rule 2201] Federally Enforceable Through Title V Permit
- Fugitive VOC emissions from component leaks shall be calculated using component count and appropriate emission factors from "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-1b (Feb 1999) - Marketing Terminal. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The floating roof shall be floating on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports the processes of filling or emptying and refilling the tank shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land the roof on its legs. [District Rule 4623; 40 CFR 60.112b(a)(1)(i) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 9. No gap between the tank shell and the primary seal shall exceed one and a half (1-1/2) inches. [District Rule 4623] Federally Enforceable Through Title V Permit
- 10. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 11. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 12. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit

EXPIRATION DATE: 01/31/2017

Permit Unit Requirements for N-758-4-4 (continued)

- 13. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 14. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 15. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 16. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than: 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
- 17. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623 and 40 CFR 60.113b(b)(4)(i)(B) and (ii)(C)] Federally Enforceable Through Title V Permit
- 18. The secondary seal shall allow easy insertion of probes of up to one and a half (1-1/2) inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 19. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 20. All openings in the roof used for sampling and gauging, except pressure-vacuum (P/V) relief valve, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 21. The tank shall be in a leak-free condition. The pressure-vacuum (PV) relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
- 22. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of t0,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 23. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface. [District Rule 4623; 40 CFR 60.112b(a)(1)(iii) and 63.11087(a)] Federalty Enforceable Through Title V Permit
- 24. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623; 40 CFR 60.112b(a)(1)(iv) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623; 40 CFR 60.112b(a)(1)(v) and 63.11087(a)] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-4-4 (continued)

- 26. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623; 40 CFR 60.112b(a)(1)(vi) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 27. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(vii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 28. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623; 40 CFR 60.112b(a)(1)(viii) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 29. Each penetration of the internal floating roof that allows for the passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix) and 63.11087(a)] Federally Enforceable Through Title V Permit
- 30. All solid sampling or gauging wells, and similar fixed projections through the floating roof such as anti-rotational pipe shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 31. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall not exceed one-half (1/2) inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 32. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, rcpair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623; 40 CFR 60.113b(a)(1) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 33. The permittee shall visually inspect, through the manholes, roof hatches, or other opening on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623; 40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 34. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. Other than the gap criteria specified by this permit, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found shall constitute a violation of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
- 35. If any failure (i.e. visible organic liquid on the internal floating roof, tank walls or anywhere, holes or tears in the seal fabric) is detected during 12 month visual inspection, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If the detected failure cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the APCO in the inspection report. Such a request must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit
- 36. The permittee shall notify the District in writing at least 30 days prior to conducting the visual inspection of the storage vessel, so the District can arrange an observer. [40 CFR 60.113b(a)(5) and 63.11092(e)(1)] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-4-4 (continued)

- 37. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date the storage vessel was emptied, date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Observed condition of each component of the control equipment (seals, internal floating roof, and fittings). 4) Measurements of the gaps between the tank shell and primary and secondary seals. 5) Leak free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 6) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.4 and 5.5.2.4.3 of Rule 4623. 7) Nature of defects and any corrective actions or repairs performed on the tank in order to comply with rule 4623 and 40 CFR Part 60 Subpart Kb and the date(s) such actions were taken. [District Rule 4623; 40 CFR 60.115b(a)(2), 60.115b(a)(3), and 63.11094(a)] Federally Enforceable Through Title V Permit
- 38. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
- 39. The permittee shall maintain records of the volatile organic liquid stored, the period of storage, and TVP of that volatile organic liquid during the respective storage period. TVP shall be determined using the data on the Reid vapor pressure (highest receipt or highest tank sample results) and actual storage temperature. [District Rule 2201 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
- 40. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
- 41. The permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Section 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain records of daily and monthly organic liquid throughput in gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
- 43. The permittee shall maintain all records required by this permit for a period of at least five years and shall made them readily available for District inspection upon request. [District Rules 2201 and 4623, and 40 CFR 60.116b(a)] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-758-13-8

EQUIPMENT DESCRIPTION:

EXPIRATION DATE: 01/31/2017

ONE JOHN ZINK VAPOR RECOVERY SYSTEM, CARBON ADSORPTION UNIT, MODEL #AA1218715B AND VAPOR BLADDER TANK #16 IN THE VAPOR RECOVERY LINE BEFORE THE VAPOR RECOVERY SYSTEM.

PERMIT UNIT REQUIREMENTS

- 1. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621] Federally Enforceable Through Title V Permit
- The vapor collection and control system shall operate such that the pressure in the delivery tank being loaded shall not exceed 18 inches water column pressure and 6 inches water column vacuum. [District Rule 4624] Federally Enforceable Through Title V Permit
- 3. The transfer rack and vapor collection equipment shall be maintained and operated such that there are no leaks and no excess organic liquid drainage at disconnections. [District Rule 4624] Federally Enforceable Through Title V Permit
- 4. The John Zink vapor processing unit shall have two operational carbon adsorption columns. Each column shall be regenerated every 15 minutes when the device is in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
- 5. The vapors from the facility's fixed roof tanks and loading rack may bypass the bladder tank (Tank #16) only during periods of time when the bladder tank is down for maintenance, repairs, breakdowns, inspection of the bladder tank, or degassing of the bladder tank. [District Rule 2201] Federally Enforceable Through Title V Permit
 - 6. Fugitive VOC emissions from this unit shall not exceed 9,362 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
 - Vapor return hose(s) shall connect displaced vapors from the truck to the vapor control system whenever tank truck, trailer, or car is loading organic liquid. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
 - 8. Vapor return hose(s) and connections between the tanker truck, trailer, or car and the vapor control system shall be leak-free. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
 - 9. The facility shall be equipped with bottom loading and a vapor collection and control system such that the VOC emissions shall not exceed 0.08 pounds per 1,000 gallons of organic liquid loaded. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
 - 10. The John Zink vapor processing unit is authorized to handle gasoline vapors from a total of no more than 895,000 gallons of gasoline throughput per day, nor 123,733,750 gallons of gasoline throughput per year. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
 - 11. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
 - 12. Source testing to demonstrate compliance with permit conditions and all rules and regulations, when the bladder tank is on-line, shall be conducted on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-13-8 (continued)

- 13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 14. Compliance with the VOC emissions limit shall be determined using 40 CFR 60.503 "Test Methods and Procedures" and EPA Methods 2A, 2B, 25A and 25B and ARB Method 422, or ARB Test Procedure TP-203.1. [District Rule 4624] Federally Enforceable Through Title V Permit
- 15. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
- 16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 17. The owner or operator shall calibrate, certify, and maintain, and quality-assure a Continuous Monitoring System (CMS) which continuously measures and records the VOCs (and other parameters, if any, to determine compliance with lb-VOC/1,000 gallon of organic liquid) while gasoline vapors are displaced to the John Zink carbon adsorption system. [District Rule 1080 and 40 CFR 63.11092(b)] Federally Enforceable Through Title V Permit
- 18. The CMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 19. The CMS shall meet the requirements in 40 CFR 60 Appendix B Performance Specification 8 (PS 8) or 8A (PS 8), as appropriate, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 20. The CMS must be audited at least once every six months by conducting cylinder gas audits (CGA) using the procedure in 40 CFR Part 60 Appendix F, 5.1.2. Audit reports shall be submitted along with semi-annual compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 21. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
- 22. The CMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 23. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 24. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rule 1080] Federally Enforceable Through Title V Permit
- 25. The owner or operator shall submit a written report of CMS operations on semi-annual basis to the District. The report shall include the following: Date, time intervals, data and magnitude of excess emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CMS was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-13-8 (continued)

- 26. A leak is defined as the dripping of VOC-containing liquid at a rate of more than 3 drops per minute, or the detection of any gaseous or vapor emissions with a concentration of VOC greater than 10,000 ppmv as methane above a background when measured using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
- 27. Excess organic liquid drainage is defined as an average of more than 10 milliliters liquid drainage per disconnect from three consecutive disconnects. [District Rule 4624] Federally Enforceable Through Title V Permit
- 28. The operator shall inspect the vapor collection system, the vapor disposal system, and each transfer rack handling organic liquids for leaks during transfer at least once every calendar quarter using the EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
- 29. All leaking components shall be repaired or replaced within 72 hours of discovery. If the leaking component cannot be repaired or replaced within 72 hours, the component shall be taken out of service until such time the component is repaired or replaced. The repaired or replacement equipment shall be reinspected the first time the equipment is in operation after the repair or replacement. [District Rule 4624] Federally Enforceable Through Title V Permit
- 30. The operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection, the inspection frequency shall revert back to quarterly, and the operator shall contact the APCO in writing within 14 days. [District Rule 4624] Federally Enforceable Through Title V Permit
- 31. Each activated carbon adsorption column shall be equipped with an operational pressure differential gauge. The optimum pressure for each column shall be determined after source testing. [District Rule 4624] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain records of all maintenance, repair, breakdown, tank inspection and testing, and degassing of the bladder tank events when the vapors are not first sent to the bladder tank and are sent directly to the John Zink vapor processing unit. These records shall indicate the times, dates and reasons why the bladder tank was off-line. [District Rule 2201] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain records of the daily gasoline throughput, cumulative annual gasoline throughput, in gallons, and results of required leak inspections. These records shall be retained for a minimum of five years and shall be made available for District inspection upon request. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
- 34. U.S. EPA administers the requirements of 40 CFR Part 63 Subpart BBBBBB. The owner or operator shall submit all applicable notifications and records to the administrator by the required compliance dates. This condition may be removed administratively from this permit once the District gets delegation from EPA to administer the requirements of 40 CFR Part 63 Subpart BBBBBB. [District Rule 4002] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-758-14-3

EQUIPMENT DESCRIPTION:

EXPIRATION DATE: 01/31/2017

DNE 689,136 GALLON (16,408 BBL) ABOVEGROUND WELDED EXTERNAL FLOATING RODF GASDLINE STDRAGE TANK (TANK #18) WITH A MECHANICAL SHOE TYPE PRIMARY SEAL AND A SECONDARY WIPE SEAL

PERMIT UNIT REQUIREMENTS

- A vapor recovery system shall be required if the true vapor pressure of the stored liquid equals or exceeds 11 psia. 1. [District Rule 4623]
- Daily throughput for this tank shall not exceed 689,136 gallons per day. [District Rule 2201] 2.
- Annual throughput for this tank shall not exceed 50,952,827 gallons per year based on a 12-month rolling basis. 3. [District Rule 2201]
- This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted 4. one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) 5. except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 6. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
- The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 7. 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not 8. exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the 9. tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 10. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 11. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.0 inch2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623 and 40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 12. If the primary seal used is a metallic shoe, one end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 inches) above the stored liquid surface. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-14-3 (continued)

- 13. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
- 14. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623 and 40 CFR 63,11087(c)] Federally Enforceable Through Title V Permit
- 15. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 16. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
- 17. All openings in the roof used for sampling and gauging, except pressure-vacuum (P/V) relief valve, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 18. The tank shall be in a leak-free condition. The pressure-vacuum (PV) relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
- 19. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv as methane, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as a dripping rate of more than three (3) drops per minute. A reading in excess of 10,000 ppmv as methane above background or a liquid leak of greater than three (3) drops per minute is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
- 20. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 21. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 22. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 23. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 24. Each emergency roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. The fabric cover must be impermeable if the liquid is drained into the contents of the tanks. [District Rule 4623 and 40 CFR 63.11087(a)] Federally Enforceable Through Title V Permit
- 25. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623] Federally Enforceable Through Title V Permit
- 26. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-14-3 (continued)

- 27. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
- 28. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 29. The slotted guidepole well on a external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
- 30. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
- 31. The permittee of external floating roof tanks shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
- 32. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 33. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 34. If unit is out of service for a period of one year or more, subsequent refilling with gasoline shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 35. Operator shall determine gap widths and gap areas for compliance with 40 CFR 60.113b(b)(2) and (3) in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off roof leg supports; 2) Measure seal gaps around entire circumference of the tank in each place where a 0.32 cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3) Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; and 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 36. If the seals do not meet the required specifications of 40 CFR 60.113b(b)(4)(i) and (ii), operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 37. Operator shall notify the APCO 30 days in advance of any gap measurements required by 40 CFR 63.11092(e)(2) and 40 CFR 60.113b(b) to afford the APCO opportunity to have an observer present. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit

Permit Unit Requirements for N-758-14-3 (continued)

- 38. After the tank has been emptied and degassed, if the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with gasoline. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 39. For all visual inspections required by 40 CFR 63.11092(e)(2), the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 40. If a visual inspection required by 40 CFR 63.11092(e)(2) is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 41. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 42. Within 30 days of the end of each semi-annual period, the operator shall include in the report required by 40 CFR 63.11095(a) the following information regarding gap measurements: the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by 40 CFR 63.11092(e)(2). [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 43. Within 30 days of the end of each semi-annual period, the operator shall include in the report required by 40 CFR 63.11095(a) the following information regarding gap measurements that exceeded 40 CFR 60.113b(4) limits: the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by 40 CFR 63.1192(e)(2), and the date the vessel was emptied or the repairs made and the date of repair. [40 CFR 63.11087(e)] Federally Enforceable Through Title V Permit
- 44. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623 and 40 CFR 63.11087(c)] Federally Enforceable Through Title V Permit
- 45. Permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
- 46. Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
- 47. Permittee shall maintain cumulative records of annual gasoline throughput in gallons on a monthly basis. [District Rule 2080] Federally Enforceable Through Title V Permit
- 48. The permittee shall maintain all records required by this permit for a period of at least five years and shall made them readily available for District inspection upon request. [District Rule 4623 and 40 CFR 63.11094(a)] Federally Enforceable Through Title V Permit