

# **Statement of Basis**

**Tier I Operating Permit No. T1-2013.0040**

**Project ID 61227**

**Tesoro Logistics Operations LLC - Boise Terminal  
Boise, Idaho**

**Facility ID 001-00026**

**Final**

**September 12, 2018**

**Dan Pitman, P.E.**

**Permit Writer**

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

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## 1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O <sub>2</sub>	oxygen
PC	permit condition
PM	particulate matter
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers

PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTE	potential to emit
PW	process weight rate
RICE	reciprocating internal combustion engines
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T1	Tier I operating permit
T2	Tier II operating permit
TAP	toxic air pollutants
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compound

## 2. INTRODUCTION AND APPLICABILITY

Tesoro Logistics Operations LLC – Boise Terminal (Tesoro) is a bulk gasoline terminal, and is located at 201 N. Phillippi St., Boise, Idaho. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit volatile organic compounds above the major source threshold of 100 tons-per-year.

The format of this Statement of Basis follows that of the permit. Tesoro Tier I operating permit is organized into sections. They are as follows:

### **Section 1 – Acronyms, Units, and Chemical Nomenclature**

The acronyms, units, and chemical nomenclature used in the permit are defined in this section.

### **Section 2 - Tier I Operating Permit Scope**

The scope describes this permitting action.

### **Section 3 - Facility-wide Conditions**

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements (MRRR) sufficient to assure compliance with a permit condition follows the permit condition.

### **Sections 4 through 10**

The emissions unit-specific sections of the permit contain the applicable requirements that specifically apply to each regulated emissions unit. Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the Facility-wide Conditions Section. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements (MRRR) sufficient to assure compliance with an applicable requirement follows the applicable requirement.

## Section 11 and 12 - Non-applicable Requirements and Insignificant Activities

This section lists those requirements that the applicant has requested as non-applicable, and DEQ proposes to grant a permit shield in accordance with IDAPA 58.01.01.325.

This section contains a list of units or activities that are insignificant on the basis of size or production rate. Units and activities listed in this section must be listed in the permit application. The regulatory citation for units and activities that are insignificant on the basis of size or production rate is IDAPA 58.01.01.317.01.b.

## Section 12 - Compliance Schedule

A compliance schedule will be included in the permit to address those sources deemed to be not in compliance with an applicable requirement at the time of permit issuance.

## Section 13 - General Provisions

The final section of the permit contains standard terms and conditions that apply to all major facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I facilities. The General Provisions have been reviewed by EPA and contain all terms and conditions required by IDAPA 58.01.01 et al as well as requirements from other air quality laws, rules and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and a rule or permit, the rule or permit shall govern.

## 3. FACILITY INFORMATION

### 3.1 Facility Description

Tesoro is a petroleum distribution terminal located in Boise. Refined petroleum products are transported to the facility via an underground pipeline system where they are either stored or transferred to another terminal. The equipment at the facility includes petroleum storage tanks, additive storage tanks, truck loading rack and vapor destruction system, and an ethanol off-loading bay.

Table 3.1 lists facility-wide product storage tank information.

**Table 3.1 Storage Tank Information**

Tank Number	Roof Type	Products Stored	Year of Construction
1	Vertical Fixed Roof	Jet Fuel	1951
2	Vertical Fixed Roof	Jet Fuel	1951
3	Vertical Fixed Roof	Jet Fuel	1951
4	Vertical Fixed Roof	Jet Fuel	1949
5	Vertical Fixed Roof	Diesel	1949
6	Vertical Fixed Roof	Diesel	1949
7	Vertical Fixed Roof	Diesel	1949
8	Internal Floating Roof	Diesel	1949
9	Vertical Fixed Roof	Out of Service	1949
12	External Floating Roof	Gasoline	1956
13	External Floating Roof	Gasoline	1956
14	Vertical Fixed Roof	Transmix	1967
162	Vertical Fixed Roof	Jet Fuel	1953
163	Vertical Fixed Roof	Jet Fuel	1953
164	External Floating Roof	Gasoline	1953
165	External Floating Roof	Gasoline	1953
166	External Floating Roof	Gasoline	1953
167	Vertical Fixed Roof	Relief	1953
200	External Floating Roof	Gasoline	1956
201	Vertical Fixed Roof	Diesel	1956
202	External Floating Roof	Gasoline	2002 <sup>a</sup>
203	External Floating Roof	Gasoline	2002 <sup>a</sup>
204	External Floating Roof	Gasoline	2002 <sup>a</sup>

205	External Floating Roof	Diesel	1956
206	External Floating Roof	Diesel	2002 <sup>a</sup>
207	External Floating Roof	Diesel	1956
208	External Floating Roof	Gasoline	1956
209	External Floating Roof	Ethanol	1956
400	Vertical Fixed Roof	Out of Service	Before 1972
401	Vertical Fixed Roof	Out of Service	Before 1972
402	Vertical Fixed Roof	Wastewater	Before 1972
403	Vertical Fixed Roof	Wastewater	Before 1972
404	Vertical Fixed Roof	Wastewater	Before 1972
A201	Vertical Fixed Roof	Additive	1994
A202	Vertical Fixed Roof	Additive	1994
A203	Vertical Fixed Roof	Additive	1994
A204	Horizontal	Additive	1994
A205	Horizontal	Additive	1995
A206	Horizontal	Additive	1995
A207	Horizontal	Additive	1996
A208	Horizontal	Additive	2006

a) Actual dates of construction are prior to 2002. Seals guide pole sleeves were installed on these tanks in 2002

### 3.2 Facility Permitting History

#### Tier I Operating Permit History - Previous 5-year permit term 11/7/08 to 11/7/13

The following information is the permitting history of this Tier I facility during the previous five-year permit term. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

November 7, 2008 T1-050032, Renewed Permit, Permit status (S by this permit action)

#### Underlying Permit History - Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

February 16, 2017 PTC No. P-2014.0009, Name change and Jet Filtration Project (A)

November 7, 2008 Tier I Operating Permit No. T1-050032, Renewed Permit, Permit status (S by this permit action)

July 16, 2003 Tier I Operating Permit No. T1-020015. This permit replaced the initial Tier I Operating Permit No. 001-00026, issued December 19, 2000. (S)

March 17, 2003 PTC No. 001-00026, issued 3/17/2003 and terminated November 6, 2017. This PTC replaced PTC No. 001-00026, issued August 28, 1990.

December 19, 2000 Tier I Operating Permit No. 001-00026, issued December 19, 2000. (S)

August 28, 1990 PTC No. 0020-0026, issued August 28, 1990. (S)

April 29, 1983 PTC issued to Chevron Pipe Line on April 29, 1983. (S)

## 4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

### 4.1 Application Scope

This permit action is for the renewal of the facility's currently effective Tier I operating permit.

New applicable requirements are to be included in the permit. There are new requirements in PTC No. P-2014.0009 issued February 16, 2017 which are added to the permit. The existing Tier I permit omitted specifically listing some applicable requirements of 40 CFR 60 Subpart Kb and 40 CFR 63 Subpart BBBBBB and they have been added to the permit.

#### 4.2 Application Chronology

June 17, 2013	DEQ received an application.
July 31, 2013	DEQ determined that the application was incomplete.
October 21, 2013	Tesoro retracts Tier I renewal application (asserting they are minor).
December 3, 2013	DEQ requests synthetic minor permit application before terminating Tier I permit application as was requested by Tesoro on 10/21/13.
September 18, 2015	Application backlogged due to workload.
September 30, 2015	Tesoro submitted a PTC application and in that they respond to the July 31, 2013 incompleteness items and make clear that they do in fact want a Tier I permit.
October 7, 2015	Project reassigned to new permit writer
November 29, 2015	Application determined administratively complete by Rule.
November 30, 2015	Application placed on hold pending issuance of PTC project 61602.
February 16, 2017	DEQ requested Tesoro update the Tier I renewal application in the transmittal letter for PTC project 61602 which was issued this same date.
August 4, 2017	DEQ received an updated Tier I application
December 11, 2017	DEQ requested the applicant update Form FRA for NSPS Subparts Kb, XX and NESHAP Subpart BBBBBB.
January 24, 2018	DEQ requested the applicant to update the CAM applicability determination.
April 30, 2018	DEQ received updated Forms FRA and CAM applicability determination.
July 25, 2018	DEQ received a compliance schedule for violation of the throughput limits at the loading rack
July 30, 2018	DEQ made available the draft permit and statement of basis for peer and regional office review.
June 27, 2018	DEQ made available the draft permit and statement of basis for applicant review.
August 6-September 5, 2018	DEQ provided a public comment period on the proposed action.
September 6, 2018	DEQ provided the proposed permit and statement of basis for EPA review.

## 5. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its

permit application. Also listed in this section are the insignificant activities based on size or production rate.

**5.1 Process No. 1 - PROCESS DESCRIPTION**

Table 5.1 lists the emissions units and control devices associated with the Storage Tanks (Section 4 of the permit). The purpose of this section of the permit is to incorporate the permit to construct requirements for storage tanks from PTC No. P-2014.0009 issued February 16, 2017.

**Table 5.1 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit Description	Control Device (if applicable)
Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, 205, 206, 207, and 208	Floating Roof
Tanks 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 162, 163, 167, 201, 209, 400, 401, 402, 403, 404, A201, A202, A203, A204, A205, A206, A207, and A208	None – Fixed Roof

Refined petroleum products are delivered to the facility through two pipelines. The two pipelines transmit gasoline, diesel fuel, and jet fuel. Gasoline, diesel fuel and jet fuel are the allowable fuel types stored in the storage tanks. Fuel additives, ethanol, transmix and wastewater are stored in storage tanks as well. There are currently 41 above-ground storage tanks.

Transmix is a blend of off-spec products (the interface mixture of diesel and jet fuel from the pipeline), residual products from other petroleum storage tanks, water contaminated with petroleum and other non-commercial products.

**5.2 Process No. 2 - PROCESS DESCRIPTION**

Table 5.2 lists the emissions units and control devices associated with the Loading Rack (Section 5 of the permit). The purpose of this section of the permit is to incorporate the permit to construct requirements for the loading rack from PTC No. P-2014.0009 issued February 16, 2017.

**Table 5.2 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit Description	Control Device (if applicable)
Loading Rack	Vapor Collection System and Vapor Combustion Unit

The loading rack at Tesoro Logistics Operations LLC is a bottom filling loading rack with a vapor collection system and vapor combustion unit. Vapors from the loading rack are captured by the vapor collection system and sent to the vapor combustion unit for incineration. The vapor combustion unit is supplemented with natural gas for the pilot light. Loading rack losses due to equipment leaks contribute to VOC emissions. Loading rack fugitive losses are not collected or incinerated.

**5.3 Process No. 3 - PROCESS DESCRIPTION**

Table 5.3 lists the emissions units and control devices associated with the Transmix Loading Operation (Section 6 of the permit). The purpose of this section of the permit is to incorporate the permit to construct requirements for transmix loading operations from PTC No. P-2014.0009 issued February 16, 2017.

**Table 5.3 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit Description	Control Device (if applicable)
Transmix Loading Arm	None

Transmix is a blend of off-spec products, residual products from other petroleum storage tanks, water contaminated with petroleum, and other non-commercial products. The transmix loading operation consists of one loading arm at a location separate from the loading rack. The transmix loading arm is not connected to vapor collection equipment or to the vapor combustion unit.

**5.4 Federal Requirements**

Sections 7, 8 and 9 of the permit incorporate the Code of Federal Regulation requirements of 40 CFR 60 Subpart Kb, 40 CFR 60 Subpart XX, and 40 CFR 63 Subpart BBBBBB respectively.

**5.5 Non-applicable Requirements for Which a Permit Shield is Requested**

Section 10 of the permit lists the regulations for which the facility has requested, and DEQ proposes to grant, a permit shield pursuant to IDAPA 58.01.01.325. The findings upon which this shield is based are presented below:

- 40 CFR 63 Subpart R –National Emission Standards for Gasoline Distribution Facilities  
This regulation applies only to HAP major sources. Tesoro is not HAP major source as certified in the application and is exempt at 40 CFR 63.420(b)(2).
- 40 CFR 60 Subpart K and Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 and After After May 18, 1978, and Prior to July 23, 1984 respectively.  
Tesoro certified in the application that none of the storage vessels were constructed, reconstructed or modified during the specified date ranges.
- 40 CFR 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

Tesoro provided the following NSPS Subpart Kb Applicability determination.

Tank Number	Subject to NSPS Kb?	Reason(s) for Inapplicability of NSPS Kb
1	No	Does not store gasoline/transmix/ethanol.
2	No	Does not store gasoline/transmix/ethanol.
3	No	Does not store gasoline/transmix/ethanol.
4	No	Does not store gasoline/transmix/ethanol.
5	No	Does not store gasoline/transmix/ethanol.
6	No	Does not store gasoline/transmix/ethanol.
7	No	Does not store gasoline/transmix/ethanol.
8	No	Does not store gasoline/transmix/ethanol.
9	No	Out of service. Does not store gasoline/transmix/ethanol.
12	No	Constructed prior to applicability date.
13	No	Constructed prior to applicability date.
14	No	Constructed prior to applicability date.
162	No	Does not store gasoline/transmix/ethanol.
163	No	Does not store gasoline/transmix/ethanol.
164	No	Constructed prior to applicability date.
165	No	Constructed prior to applicability date.
166	No	Constructed prior to applicability date.
167	No	Constructed prior to applicability date.
200	No	Constructed prior to applicability date.
201	No	Does not store gasoline/transmix/ethanol.
202	Yes	--
203	Yes	--
204	Yes	--
205	No	Does not store gasoline/transmix/ethanol.
206	No	Does not store gasoline/transmix/ethanol.
207	No	Does not store gasoline/transmix/ethanol.
208	No	Constructed prior to applicability date.
209	No	Constructed prior to applicability date.
400	No	Out of service. Does not store gasoline/transmix/ethanol.
401	No	Out of service. Does not store gasoline/transmix/ethanol.
402	No	Does not store gasoline/transmix/ethanol.
403	No	Does not store gasoline/transmix/ethanol.
404	No	Does not store gasoline/transmix/ethanol.
A201	No	Capacity less than 75 m <sup>3</sup>
A202	No	Capacity less than 75 m <sup>3</sup>
A203	No	Capacity less than 75 m <sup>3</sup>
A204	No	Capacity less than 75 m <sup>3</sup>
A205	No	Capacity less than 75 m <sup>3</sup>
A206	No	Capacity less than 75 m <sup>3</sup>
A207	No	Capacity less than 75 m <sup>3</sup>
A208	No	Capacity less than 75 m <sup>3</sup>

<sup>a</sup> Gasoline, transmix, and ethanol have maximum true vapor pressures that are sufficiently high to trigger NSPS Subpart Kb. Diesel fuel and jet kerosene do not.

- 40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This regulation applies only to HAP major sources. Tesoro is not HAP major source as certified in the application and is exempt.

- 40 CFR 63 Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This regulation applies to boilers which are defined as an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water. Tesoro certified in the application that they do not have boilers as that term is defined.

## 5.6 Insignificant Emissions Units Based on Size or Production Rate

Section 11 of the permit contains a list of units or activities that are insignificant on the basis of size or production rate. Units and activities listed in this section must be listed in the permit application. Table 5.4 lists the units and activities which have been determined to be insignificant on the basis of size or production rate. The regulatory authority for emissions units and activities that are insignificant on the basis of size or production rate is IDAPA 58.01.01.317.01.b.

**Table 5.4 INSIGNIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION**

Emissions Unit / Activity	Regulatory Authority / Justification
Space heaters and hot water heaters using natural gas, propane or kerosene and generating less than five million (5,000,000) Btu/hr.	317.01.b.i.18
Tank A201-Tank A208 (additive tanks)	317.01.b.i.30
Welding using not more than one (1) ton per day of welding rod.	317.01.b.i.9

**5.7 Emissions Inventory**

Table 5.5 summarizes the emissions inventory for this major facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hour of operation or on the type or amount of material combusted, stored or processed shall be treated as part of its design if the limitation or the effect it would have on emission is state or federally enforceable.

The documentation provided by the applicant for the emissions inventory and emission factors is provided as Appendix A of this statement of basis.

**Table 5.5 EMISSIONS INVENTORY - POTENTIAL TO EMIT (T/yr)**

Source Description	PM <sub>10</sub> T/yr	NO <sub>x</sub> T/yr	CO T/yr	VOC T/yr	HAP T/yr
Tank Losses				57.81	1.64
Vapor Combustion Unit	0.04	2.44	1.36	37.60	0.58
Space Heaters, Furnaces	0.02	0.47	0.07	0.02	0.0052
Product Loading Rack Losses				9.95	0.15
Equipment Leak Fugitives				2.64	0.42
Transmix Loading Operation				2.12	0.03
Fugitive Dust – Vehicle Traffic	0.43				
<b>Total Emissions</b>	<b>0.49</b>	<b>2.91</b>	<b>1.43</b>	<b>110.14</b>	<b>2.83</b>

**6. EMISSIONS LIMITS AND MRRR**

This section contains the applicable requirements for this T1 facility.

This section is divided into the following subsections.

- Facility-Wide Conditions;
- Storage Tanks Emissions Limits;
- Loading Rack Emissions Limits;
- Transmix Loading Operation Emissions Limits;
- 40 CFR 60 Subpart Kb
- 40 CFR 60 Subpart XX Emission Limits;
- 40 CFR 63 Subpart BBBB Emission Limits;

- Tier I Operating Permit General Provisions.

### ***MRRR***

Monitoring, recordkeeping and reporting requirements (MRRR) are the means with which compliance with an applicable requirement is demonstrated. In this section, the applicable requirement (permit condition) is provided first followed by the MRRR. Should an applicable requirement not include sufficient MRRR to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit (i.e. gap filling). In addition to the specific MRRR provided for each applicable requirement, generally applicable facility-wide conditions and general provisions may also be provided, such as performance testing, reporting, and certification requirements.

The legal and factual basis for each permit condition is provided for in this document. If a permit condition was changed due to facility draft comments or public comments, an explanation of the changes is provided.

### ***State Enforceability***

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

### ***Federal Enforceability***

Unless identified as "State-only," all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, the following permit conditions and MRRR have been paraphrased. Refer to the permit for the complete requirements.

## **6.1 Facility-Wide Conditions**

### **Permit Condition 3.1 - Fugitive Dust**

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/07]

### **MRRR (Permit Conditions 3.2 through 3.4)**

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint;
- Conduct facility-wide inspections of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/2000]

### **Permit Condition 3.5 - Odors**

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (State-only), 5/1/94]

### **MRRR (Permit Condition 3.6)**

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;

- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (State only), 5/1/94]

**Permit Condition 3.7 - Visible Emissions**

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

**MRRR (Permit Condition 3.8 through 3.9)**

- Conduct facility-wide inspections of all emissions units subject to the visible emissions standards (or rely on continuous opacity monitoring);
- If visible emissions are observed, take appropriate corrective action and/or perform a Method 9 opacity test;
- Maintain records of the results of each visible emissions inspection.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

**Permit Conditions 3.10 through 3.14 - Excess Emissions**

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between the excess emissions facility wide conditions and the regulations of IDAPA 58.01.01.130-136.

**MRRR (Permit Conditions 3.11 through 3.14)**

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in Sections 131 through 136.

- Take appropriate action to correct, reduce, and minimize emissions from excess emissions events;
- Prohibit excess emissions during any DEQ Atmospheric Stagnation Advisory or Wood Stove Curtailment Advisory;
- Notify DEQ of each excess emissions event as soon as possible, including information regarding upset, breakdown, or safety events.
- Submit a report for each excess emissions event to DEQ;
- Maintain records of each excess emissions event.

**Permit Condition 3.15 – Fuel-Burning Equipment PM Standards**

The permittee shall not discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas fuel.

[IDAPA 58.01.01.676-677, 5/1/94]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.16 - Sulfur Content Limits**

The permittee shall not sell, distribute, use, or make available for use any of the following:

- Distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil, 0.3% by weight.
- ASTM Grade 2 fuel oil, 0.5% by weight.

[IDAPA 58.01.01.725, 3/29/10]

**MRRR - (Permit Condition 3.17)**

The permittee shall maintain documentation of supplier verification of fuel sulfur content on an as received basis and the permittee shall determine the sulfur content in each distillate fuel storage tank on a semiannual basis by testing; or

the permittee shall obtain documentation of the distillate fuel oil sulfur content from the refinery or refineries that produce(s) the fuel. Acceptable documentation shall include current contractual agreements which specify that the sulfur contents of distillate fuel oils entering the pipe line from the refinery are within the limits specified in this permit. In addition, the permittee shall determine the sulfur content in each distillate fuel storage tank on a semiannual basis by testing.

[IDAPA 58.01.01.322.06, 5/1/94]

**Permit Condition 3.18 - Open Burning**

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 5/08/09]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.19 - Asbestos**

The permittee shall comply with all applicable requirements of 40 CFR 61, Subpart M—“National Emission Standard for Asbestos.”

[40 CFR 61, Subpart M]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.20 - Accidental Release Prevention**

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.21 - Recycling and Emissions Reductions**

The permittee shall comply with applicable standards for recycling and emissions reduction of refrigerants and their substitutes pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.22 through 3.23- NSPS/NESHAP General Provisions**

This facility is subject to NSPS/NESHAP Part 60 Subparts Kb and XX, a Part 61 Subpart M, and Part 63 Subpart BBBBBB and is therefore required to comply with applicable General Provisions.

[40 CFR 60/63, Subpart A]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.24 - Monitoring and Recordkeeping**

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Conditions 3.25 through 3.28 - Performance Testing**

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

**MRRR (Permit Conditions 3.26 and 3.28)**

The permittee shall submit compliance test report(s) to DEQ following testing.

**Permit Condition 3.29 - Reports and Certifications**

This permit condition establishes generally applicable MRRR for submittal of reports, certifications, and notifications to DEQ and/or EPA as specified.

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 3.30 - Incorporation of Federal Requirements by Reference**

Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein.

**MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**6.2 Emissions Unit-Specific Emissions Limits and MRRR**

**Storage Tanks, Section 4 of the permit.**

**Permit Condition 4.1**

VOC emissions from the storage tanks are limited to 57.81 tons per year.

**MRRR**

Permit Condition 4.2 limits the throughput of the tanks to assure compliance with the emissions limit. Permit Conditions 4.4 and 4.5 include monitoring requirements to assure compliance with throughput restrictions.

**Loading Rack, Section 5 of the permit.**

**Permit Condition 5.1**

The emissions from the loading rack shall not exceed any corresponding emissions rate limits listed in the following table.

**Table 6.1 Loading Rack Emission Limits<sup>(a)</sup>**

Source Description	NO <sub>x</sub>		CO		VOC
	lb/hr <sup>(b)</sup>	T/yr <sup>(c)</sup>	lb/hr <sup>(b)</sup>	T/yr <sup>(c)</sup>	T/yr <sup>(c)</sup>
Vapor Combustion Unit	8.37	2.44	4.69	1.36	37.60
Loading Rack Losses	N/A	N/A	N/A	N/A	9.95

<sup>a</sup> In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.

## **MRRR**

The footnote to the permit table specifies that complying with the permit operating, monitoring and record keeping requires assures compliance. Permit Condition 5.2 limits the throughput of the loading rack and Permit Condition 5.5 requires that the loading rack be equipped with a vapor collection and combustion system. Monitoring of throughput and monitoring of the vapor combustion unit is required by Permit Conditions 5.9 and 5.10.

### **Tansmix Loading Operation, Section 6 of the permit.**

#### **Permit Condition 6.1**

VOC emissions from the transmix loading operations are limited to 2.12 tons per year.

## **MRRR**

Permit Conditions 6.2 and 6.3 limits the throughput of the tanks to assure compliance with the emissions limit. Permit Conditions 6.4 and 6.5 include monitoring requirements to assure compliance with throughput restrictions.

### **Volatile Organic Liquid Storage Vessels – 40 CFR 60 Subpart Kb, Section 7 of the permit.**

The sole purpose of this section of the permit is to incorporate the applicable requirements of 40 CFR 60 Subpart Kb. There are no applicable emission limits. This subpart requires operation of external floating roof tanks that meet specified physical characteristics as determined by periodic inspections.

The applicability of this subpart is further addressed in the Regulatory Review Section of this Statement of Basis and the appendixes of this Statement of Basis.

### **Bulk Gasoline Terminals – 40 CFR 60 Subpart XX, Section 8 of the permit.**

The purpose of this section of the permit is to incorporate the applicable requirements of 40 CFR 60 Subpart XX and to add monitoring to assure compliance with Subpart XX emission standards where the subpart does not include periodic monitoring.

#### **Permit Condition 8.1**

In accordance with 40 CFR 60.502(b) emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded. Also, loading of gasoline is limited to vapor-tight gasoline tank trucks. The subpart specifies that the vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. The vapor collection system, vapor processing system, loading rack liquid or vapor leaks must be repaired within 15 days.

## **MRRR**

The subpart includes periodic monitoring to assure vapor-tight gasoline tank trucks are loaded and periodic monitoring for liquid or vapor leaks.

However, the subpart does not have ongoing compliance determinations for the 35 milligrams of total organic compounds (TOC) per liter of gasoline loaded standard or for 4,500 pascals the gauge pressure in the delivery tank standard. Therefore, DEQ has added a source test as “gap filling” monitoring to assure compliance with these two standards. The test is required to be conducted using the methods specified in §60.503 and it is required to be conducted once per permit term. This test is authorized under IDAPA 58.01.01.322.06.

Also, as discussed in the following section, Tesoro has elected to comply with this 35 mg/l TOC standard in lieu of the 80 mg/l TOC standard included in 40 CFR 63 Subpart BBBBBB (as allowed at §63.11081(i)). The approved monitoring under Subpart BBBBBB to comply with the 35 mg/l TOC standard includes a performance test once each 5 years.

The applicability of this subpart is further addressed in the Regulatory Review Section of this Statement of Basis and the appendixes of this Statement of Basis.

**Bulk Gasoline Terminals – 40 CFR 63 Subpart BBBBBB, Section 9 of the permit.**

**Permit Condition 9.4**

In accordance with 40 CFR 63.11088(a) total organic compound (TOC) emissions from the bulk gasoline loading rack must be less than or equal to 80 mg/l of gasoline loaded into gasoline cargo tanks at the loading rack. However, in accordance with §63.11081(i) the source may elect to comply with a more stringent standard by identifying the affected source and provisions with which they will comply in the Notification of Compliance Status required under §63.11093. This notification was provided in the application for this permit and Tesoro intends to comply with the more stringent 35 mg/l TOC limit of 40 CFR 60 Subpart XX.

**MRRR**

40 CFR 63 Subpart BBBBBB was proposed by EPA after 1990 thereby assuring that monitoring requirements of the Subpart will satisfy the monitoring requirements of title V permits (i.e., Tier I permits). This is described by EPA in the October 22, 1997 Federal Register page 54915 (Federal Register/Vol. 62, No. 204). Additionally, this emission standard is specifically exempted from compliance assurance monitoring (CAM) requirements as detailed at 40 CFR 64.2(b)(i) because this subpart was proposed after November 15, 1990.

In accordance with §63.11092 (b)(5)(ii) Tesoro determined an operating parameter value to assure compliance with the 35 mg/l TOC standard based on engineering assessment and the manufacturer's recommendation. The proposed operating parameter value was to assure that pilot flame is present in combustor. In accordance with §63.11092 (b)(5)(ii) DEQ approved this monitoring approach with the provision that the loading rack vapor combustor be tested once 5 years to determine compliance thereby assuring the approved monitoring parameter (i.e. pilot flame) provides a reasonable assurance of compliance as required by CAM (40 CFR 64.3(a)). Performance testing shall be conducted using 40 CFR 60.503 test methods and procedures except that 500 ppm shall be used as the leak detection threshold.

The applicability of this subpart is further addressed in the Regulatory Review Section of this Statement of Basis and the appendixes of this Statement of Basis.

**Non-applicable Requirements and Insignificant Activities, Section 10 and 11 of the permit.**

Section 10 and Section 11 of the permit include, respectively, the Non-applicable Requirements and Insignificant Activities provisions. There are not emissions limits associated with these sections of the permit.

**Compliance Schedule, Section 12 of the permit.**

The compliance schedule follows the applicable requirements of IDAPA 58.01.01.322.10 and IDAPA 58.01.01.314.10.b.

Tesoro Logistics Operations provided a compliance schedule in accordance with IDAPA 58.01.01.314.10.b for violations of the gasoline throughput limits at the loading rack that originate from PTC No. P-2014.0009 issued February 16, 2017. PTC Permit Condition 3.5 limits the gasoline throughput to 256,230,000 gallons per any consecutive 12-month period. The violation is documented in DEQ's July 3, 2018 inspection report (Content Manager Record 2018AAI1670). Tesoro reported the following throughputs (Content Manager Record 2018AAI1708) which are all in excess of the limit:

March 2017 – February 2018	266,198,195 gal/yr
April 2017 – March 2018	266,436,076 gal/yr
May 2017 – April 2018	278,065,399 gal/yr
June 2017 – May 2018	278,619,316 gal/yr

The compliance schedule in the Tier I operating permit requires that a permit to construct application be submitted within 30 of issuance of the Tier I permit to allow an increase in throughput of the loading rack. Additionally, if DEQ determines that more information is needed after the application is submitted Tesoro shall respond to that written information request within 30 days. The compliance schedule in the permit does not sanction violating the existing throughput limit.

### **6.3 General Provisions**

Unless expressly stated, there are no MRRR for the general provisions.

#### **General Compliance, Duty to Comply**

The permittee must comply with the terms and conditions of the permit.

[IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]

#### **General Compliance, Need to Halt or Reduce Activity Not a Defense**

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]

#### **General Compliance, Duty to Supplement or Correct Application**

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

#### **Reopening, Additional Requirements, Material Mistakes, Etc.**

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/94; IDAPA 58.01.01.386, 3/19/99; 40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

#### **Reopening, Permitting Actions**

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If the permittee files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

#### **Property Rights**

This permit does not convey any property rights of any sort, or any exclusive privilege.

[IDAPA 58.01.01.322.15.e, 5/1/94; 40 CFR 70.6(a)(6)(iv)]

#### **Information Requests**

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code §39-108; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.f, 4/5/00; 40 CFR 70.6(a)(6)(v)]

#### **Information Requests, Confidential Business Information**

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code §9-342A and applicable implementing regulations including IDAPA 58.01.01.128.

[IDAPA 58.01.01.322.15.g, 5/1/94; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

## Severability

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

## Changes Requiring Permit Revision or Notice

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/08; IDAPA 58.01.01.322.15.i, 3/19/99; IDAPA 58.01.01.380-386, 7/1/02; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA 58.01.01.383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/02; IDAPA 58.01.01.209.05, 4/11/06; 40 CFR 70.4(b)(14) and (15)]

## Federal and State Enforceability

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/94; IDAPA 58.01.01.322.15.k, 3/23/98; Idaho Code §39-108; 40 CFR 70.6(b)(1), (2)]

## Inspection and Entry

Upon presentation of credentials, the facility shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

## New Applicable Requirements

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

## Fees

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/03; 40 CFR 70.6(a)(7)]

## **Certification**

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

## **Renewal**

The permittee shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/00; 40 CFR 70.5(a)(1)(iii)]

If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and conditions of this permit including any permit shield that may have been granted pursuant to IDAPA 58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.

[IDAPA 58.01.01.322.15.p, 5/1/94; 40 CFR 70.7(b)]

## **Permit Shield**

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
  - DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.
- The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).
- Nothing in this permit shall alter or affect the following:
  - Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
  - The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
  - The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code §39-108 and IDAPA 58.01.01.122.

[Idaho Code §39-108 and 112; IDAPA 58.01.01.122, 4/5/00;  
IDAPA 58.01.01.322.15.m, 325.01, 5/1/94; IDAPA 58.01.01.325.02, 3/19/99;  
IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/99; 40 CFR 70.6(f)]

## **Compliance Schedule and Progress Reports**

- For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
- For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.

- For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.
- For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.  
[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.9, 5/1/94; IDAPA 58.01.01.314.10, 4/5/00; 40 CFR 70.6(c)(3) and (4)]

### **Periodic Compliance Certification**

The permittee shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as specified.

- Compliance certifications for all emissions units shall be submitted annually unless otherwise specified;
- All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 70.6(c)(5)(iii) as amended, 62 Fed. Reg. 54900, 54946 (10/22/97); 40 CFR 70.6(c)(5)(iv)]

### **False Statements**

The permittee may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

### **No Tampering**

The permittee may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

### **Semiannual Monitoring Reports.**

In addition to all applicable reporting requirements identified in this permit, the permittee shall submit reports of any required monitoring at least every six months as specified.

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.322.08.c, 4/5/00; 40 CFR 70.6(a)(3)(iii)]

### **Reporting Deviations and Excess Emissions**

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.08.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition
- Emission control device does not meet a required operating condition
- Observations or collected data that demonstrate noncompliance with an emissions standard
- Failure to comply with a permit term that requires a report

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/11/06; 40 CFR 70.6(a)(3)(iii)]

### **Permit Revision Not Required, Emissions Trading**

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/00; 40 CFR 70.6(a)(8)]

**Emergency**

In accordance with IDAPA 58.01.01.332, an “emergency” as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/00; 40 CFR 70.6(g)]

**7. REGULATORY REVIEW**

**7.1 Attainment Designation (40 CFR 81.313)**

The facility is located in Ada County which is designated as attainment or unclassifiable for PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>2</sub>, SO<sub>x</sub>, and Ozone. Reference 40 CFR 81.313.

**7.2 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)**

Tesoro is classified as a Title V (i.e. Tier I) major source because VOC emissions are greater than 100 tons per year.

**7.3 PSD Classification (40 CFR 52.21)**

Tesoro’s bulk gasoline terminal is not a listed source category and potential emissions do not equal or exceed 250 tons per year. Therefore, the facility is not a classified as a PSD source.

**7.4 NSPS Applicability (40 CFR 60)**

40 CFR 60, Subpart K ..... Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978

None of the terminals storage vessels were constructed or modified during the applicability time frame.

40 CFR 60, Subpart Ka..... Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984

None of the terminals storage vessels were constructed or modified during the applicability time frame.

40 CFR 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

Tank 202, 203 and 204 are subject to this subpart. A detailed regulatory breakdown of the applicability of this subpart is provided in Appendix B.

40 CFR 60, Subpart XX..... Standards of Performance for Bulk Gasoline Terminals

The gasoline loading racks at the facility are subject to this subpart. A detailed regulatory breakdown of the applicability of this subpart is provided in Appendix C.

**7.5 NESHAP Applicability (40 CFR 61)**

None of the activities included in the application are subject provisions of 40 CFR 61. DEQ standard Tier I operating permit conditions include the asbestos NESHAP (40 CFR 61 Subpart M) in case the facility ever does engage in an activity subject to that subpart.

**7.6 MACT Applicability (40 CFR 63)**

40 CFR 63, Subpart R..... National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)

This subpart is only subject to HAP major facilities. Tesoro is not a HAP major source and this subpart does not apply.

40 CFR 63, Subpart DDDDD ..... National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart is only subject to HAP major facilities. Tesoro is not a HAP major source and this subpart does not apply.

40 CFR 63, Subpart BBBB ..... National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities

The terminal is a bulk gasoline terminal as described in this subpart. Therefore, the terminal is subject to NESHA Subpart BBBB. This rule establishes standards for the following source types:

- Gasoline Storage Tanks
- Gasoline Loading Racks
- Gasoline Cargo Tanks
- Equipment in Gasoline Liquid or Vapor Service

A detailed regulatory breakdown of the applicability of this subpart is provided in Appendix D.

40 CFR 63, Subpart JJJJJ ..... National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The facility does not have equipment that meets the definition of boiler.

## 7.7 CAM Applicability (40 CFR 64)

Compliance Assurance Monitoring (CAM) applicability consists of three criteria codified in 40 CFR 64.2(a), all of which must be met for a unit to be subject to the CAM program:

- The unit must be subject to an emission limitation or standard for a regulated air pollutant;
- The unit must use a control device to achieve compliance with the limit or standard;
- The unit must have an uncontrolled Potential to Emit (PTE) of 100% (or more) of the quantity in tons per year (tpy) of the Tier I major source threshold.

The loading rack at the facility is subject to an 37.60 ton per year VOC emission limitation at the loading rack.

The facility uses a vapor combustion unit (VCU) to achieve compliance with the emission limitation.

The major source threshold for VOC under the Tier I permit program is 100 tpy. An uncontrolled gasoline loading emission factor was calculated in order to estimate the quantity of vapor captured and routed to the VCU; this factor is 5.95 lb VOC per 1,000 gal gasoline (lb/Mgal), based on RVP 15 gasoline for conservatism. The uncontrolled VOC PTE of the terminal's truck loading rack is therefore estimated as:

$$\frac{(236,230 \text{ Mgal/yr}) (5.95 \text{ lb/Mgal})}{2,000 \text{ lb/ton}} = 762 \text{ tpy VOC}$$

It appears that CAM requirements are applicable to assure compliance with the 37.60 ton per year VOC emission limitation on the VCU.

However, there are exemptions from CAM at 40 CFR 64.2(b)(i) and 40 CFR 64.2(b)(vi).

These exemptions state:

*(b) Exemptions—(1) Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards:*

*(i) Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act.*

*vi) Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1. The exemption provided in this paragraph (b)(1)(vi) shall not apply if the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (such as a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).*

It is noted that the VCU unit is subject to a 35 mg/l total organic carbon (TOC) emission limitation under MACT Subpart BBBB. However, CAM is not applicable to the 35 mg/l total organic carbon (TOC) emission standard as it qualifies for the specific exemption at 40 CFR 64 Subpart 64.2(b)(1)(i) because the 35 mg/l TOC emission limitation originates from section 112 of Clean Air Act and the standard was proposed after November 15, 1990.

The permit has a throughput restriction to assure compliance with the ton per year emission limit. Those limitations in combination with the 35 mg/l standard assure compliance. This exempts the source from CAM in accordance with 40 CFR 64.2(b)(vi).

#### **7.8 Acid Rain Permit (40 CFR 72-75)**

The acid rain permit provisions of 40 CFR 72-75 are not applicable.

### **8. PUBLIC COMMENT**

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from August 6 through September 5, 2018. During this time, comments were not submitted in response to DEQ's proposed action.

### **9. EPA REVIEW OF PROPOSED PERMIT**

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on September 6, 2018 via e-mail. On September 9, 2018, EPA Region 10 responded to DEQ via e-mail indicating they do not object to permit issuance.

## Appendix A - Emissions Inventory

**Table C-1. Facilitywide Regulated NSR Pollutants PTE**

<b>Emission Unit</b>	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>VOC (tpy)</b>	<b>CO (tpy)</b>	<b>GHG (tpy CO<sub>2</sub>e)</b>
<b>Point Sources</b>								
Tanks	--	--	--	--	--	57.81	--	--
VCU Stack	0.04	0.04	0.04	3.00E-03	2.44	37.60	1.36	886.87
Space Heaters, Furnaces	0.02	0.02	0.02	1.66E-03	0.47	1.52E-02	0.07	329.52
<b>Fugitive Sources</b>								
Product Loading Rack	--	--	--	--	--	9.95	--	--
Equipment Leak Fugitives	--	--	--	--	--	2.64	--	--
Transmix Loading Operation	--	--	--	--	--	2.12	--	--
Fugitive Dust from Vehicle Operations	1.91	0.43	0.16	--	--	--	--	--
<b>Total</b>	<b>1.96</b>	<b>0.49</b>	<b>0.22</b>	<b>4.65E-03</b>	<b>2.91</b>	<b>110.14</b>	<b>1.43</b>	<b>1,216.39</b>

Table C-2. Facilitywide PTE by Pollutant

Pollutant	CAS No.	Tanks <sup>a</sup> (tpy)	Product Loading Rack <sup>b</sup> (tpy)	VCU Stack <sup>c</sup> (tpy)	Space Heaters, Furnaces <sup>d</sup> (tpy)	Equipment Leak Fugitives <sup>e</sup> (tpy)	Transmix Loading Operation <sup>f</sup> (tpy)	Fugitive Dust (tpy)	TOTAL FACILITY EMISSIONS	MAXIMUM HAP (tpy)
<b>Criteria Pollutant (tpy)</b>										
CO	--	--	--	1.36	0.07	--	--	--	1.43	N/A
NO <sub>x</sub>	--	--	--	2.44	0.47	--	--	--	2.91	N/A
VOC	--	57.81	9.95	37.60	0.02	2.64	2.12	--	110.14	N/A
PM <sub>2.5</sub>	--	--	--	0.04	0.02	--	--	0.16	0.22	N/A
PM <sub>10</sub>	--	--	--	0.04	0.02	--	--	0.43	0.49	N/A
PM	--	--	--	0.04	0.02	--	--	1.91	1.96	N/A
SO <sub>2</sub>	--	--	--	0.00	0.00	--	--	--	0.00	N/A
<b>HAP (tpy)<sup>b</sup></b>										
2,2,4-Trimethylpentane	540-84-1	1.48E-01	2.01E-02	7.61E-02	--	5.10E-02	4.30E-03	--	0.30	--
Benzene	71-43-2	1.28E-01	2.59E-02	9.80E-02	5.80E-06	3.36E-02	5.52E-03	--	0.29	--
Biphenyl	92-52-4	5.31E-04	6.53E-06	2.48E-05	--	--	7.69E-07	--	0.00	--
Cresols	1319-77-3	6.89E-04	3.93E-06	1.49E-05	--	--	6.69E-07	--	0.00	--
Ethylbenzene	100-41-4	8.91E-02	2.68E-03	1.01E-02	--	2.40E-02	4.55E-04	--	0.13	--
Hexane (n)	110-54-3	4.18E-01	4.85E-02	1.92E-01	4.97E-03	3.49E-02	1.00E-02	--	0.71	--
Isopropyl benzene (cumene)	98-82-8	1.58E-02	3.14E-04	1.19E-03	--	3.88E-03	4.80E-05	--	0.02	--
Methyl alcohol	67-56-1	1.75E-02	3.42E-03	1.29E-02	--	3.72E-03	7.28E-04	--	0.04	--
Naphthalene	91-20-3	6.88E-03	6.04E-05	2.32E-04	1.68E-06	7.84E-03	8.79E-06	--	0.02	--
Phenol	108-95-2	5.82E-03	2.44E-05	9.25E-05	--	--	5.51E-06	--	0.01	--
Styrene	100-42-5	1.24E-03	8.97E-05	3.39E-04	--	2.02E-03	1.91E-05	--	0.00	--
Toluene	108-88-3	4.89E-01	3.36E-02	1.27E-01	9.39E-06	1.36E-01	6.65E-03	--	0.79	YES
Xylenes	1330-20-7	3.20E-01	1.52E-02	5.76E-02	--	1.27E-01	2.71E-03	--	0.52	--
<b>Additional HAP (tpy)<sup>g</sup></b>										
<b>from Natural Gas Combustion</b>										
2-Methylnaphthalene	91-57-6	--	--	1.20E-07	6.63E-08	--	--	--	1.86E-07	--
3-Methylchloranthrene	56-49-5	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
7,12-Dimethylbenz(a)anthracene	57-97-6	--	--	7.99E-08	4.42E-08	--	--	--	1.24E-07	--
Acenaphthene	83-32-9	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Acenaphthylene	203-96-8	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Anthracene	120-12-7	--	--	1.20E-08	6.63E-09	--	--	--	1.86E-08	--
Benzo(a)anthracene	56-55-3	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Benzo(a)pyrene	50-32-8	--	--	5.99E-09	3.31E-09	--	--	--	9.30E-09	--
Benzo(b)fluoranthene	205-99-2	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Benzo(g,h,i)perylene	191-24-2	--	--	5.99E-09	3.31E-09	--	--	--	9.30E-09	--
Benzo(k)fluoranthene	205-82-3	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Chrysene	218-01-9	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Dibenz(a,h)anthracene	53-70-3	--	--	5.99E-09	3.31E-09	--	--	--	9.30E-09	--
Dichlorobenzene	25321-22-6	--	--	5.99E-06	3.31E-06	--	--	--	9.30E-06	--
Fluoranthene	206-44-0	--	--	1.50E-08	8.28E-09	--	--	--	2.33E-08	--
Fluorene	86-73-7	--	--	1.40E-08	7.73E-09	--	--	--	2.17E-08	--
Formaldehyde	50-00-0	--	--	3.74E-04	2.07E-04	--	--	--	5.82E-04	--
Indeno(1,2,3-cd)pyrene	193-39-5	--	--	8.99E-09	4.97E-09	--	--	--	1.40E-08	--
Phenanthrene	85-01-8	--	--	8.49E-08	4.69E-08	--	--	--	1.32E-07	--
Pyrene	129-00-0	--	--	2.50E-08	1.38E-08	--	--	--	3.88E-08	--
Arsenic	7440-38-2	--	--	9.99E-07	5.52E-07	--	--	--	1.55E-06	--
Beryllium	7440-41-7	--	--	5.99E-08	3.31E-08	--	--	--	9.30E-08	--
Cadmium	7440-43-9	--	--	5.49E-06	3.04E-06	--	--	--	8.53E-06	--
Chromium	7440-47-3	--	--	6.99E-06	3.87E-06	--	--	--	1.09E-05	--
Cobalt	7440-48-4	--	--	4.19E-07	2.32E-07	--	--	--	6.51E-07	--
Manganese	7439-96-5	--	--	1.90E-06	1.05E-06	--	--	--	2.95E-06	--
Mercury	7439-97-6	--	--	1.30E-06	7.18E-07	--	--	--	2.02E-06	--
Nickel	7440-02-0	--	--	1.05E-05	5.80E-06	--	--	--	1.63E-05	--
Selenium	7782-49-2	--	--	1.20E-07	6.63E-08	--	--	--	1.86E-07	--
<b>Total HAP</b>		<b>1.64</b>	<b>0.15</b>	<b>0.58</b>		<b>0.42</b>	<b>0.03</b>	<b>0.00</b>	<b>2.83</b>	
<b>GHG (tpy CO<sub>2</sub>e)</b>				<b>886.87</b>		<b>329.52</b>			<b>1,216.39</b>	

<sup>a</sup> Tank emissions calculated using AP-42 Section 7.1; results calculated in Table C-6a.

<sup>b</sup> Product loading rack fugitive VOC and speciated emissions presented in Table C-14a.

<sup>c</sup> VCU stack emissions are calculated in Tables C-11a (uncombusted vapor) and C-13 (combustion byproducts). Certain HAP emission factors for natural gas combustion at the VCU overlap with speciated HAP calculated from uncombusted fuel loading vapors. HAP emissions from both the uncombusted vapors and natural gas combustion are included for conservatism.

<sup>d</sup> Natural gas combustion emissions for space heaters and furnaces are calculated in Table C-13.

<sup>e</sup> Equipment leak fugitive emissions are calculated in Tables C-9 and C-10.

<sup>f</sup> Transmix loading operation emissions are calculated in Table C-14a.

<sup>g</sup> Additional HAP represent HAP whose only source is natural gas combustion, for which AP-42 Section 1.4 includes speciated emission factors.

Table C-3a. Gasoline and Diesel Fuel Liquid Speciation

Refinery Unit	Refinery Stream	Benzene 71-43-2 (wt frac)	Biphenyl 92-52-4 (wt frac)	Cresol 1319-77-3 (wt frac)	Isopropyl Benzene (Cumene) 98-82-8 (wt frac)	Ethyl benzene 100-41-4 (wt frac)	Hexane (n) 110-54-3 (wt frac)	Methanol 67-56-1 (wt frac)	Naphthalene 91-20-3 (wt frac)	Phenol 108-95-2 (wt frac)	Styrene 100-42-5 (wt frac)	1,2,4-Trimethyl benzene 95-63-6 (wt frac)	2,2,4-Trimethyl pentane (Isooctane) 540-84-1 (wt frac)	Toluene 108-88-3 (wt frac)	Xylenes 1330-20-7 (wt frac)
Distillate Blending	Diesel Fuel	ND	7.10E-04	5.00E-04	2.40E-04	2.90E-04	1.60E-04	ND	1.70E-03	2.60E-03	0.00E+00	2.25E-03	1.20E-04	5.00E-04	1.22E-03
Gasoline Blending	Conventional Gasoline	1.29E-02	0.00E+00	ND	1.50E-03	9.26E-03	1.34E-02	1.43E-03	3.03E-03	ND	7.80E-04	2.12E-02	1.97E-02	5.25E-02	4.91E-02
Jet	Jet	ND	2.10E-03	3.20E-04	5.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	3.70E-04	0.00E+00	5.94E-03	ND	2.35E-02	6.64E-03

<sup>a</sup> Values reported in weight fractions. Chemical weight fraction from API Publ. 4723, 11/1/2002 (PERF), Section 5.1, pp. 16, 19, and 21. The PERF speciation data provided non-detect results for propane and butane in distillate blending (diesel fuel), and 0.029 wt% propane and 2.922 wt% butane for gasoline blending (conventional gasoline). Neither propane nor butane are HAP.

Table C-3b. Boise Transmix Composition Data

Products	Product Volume Percent in Transmix <sup>a</sup>	Product Weight Percent	Benzene	Biphenyl	Cresol	Isopropyl Benzene (Cumene)	Ethyl benzene	Hexane (n)	Methanol	Naphthalene	Phenol	Styrene	1,2,4-Trimethyl benzene	2,2,4-Trimethyl pentane (Isooctane)	Toluene	Xylenes
Product Weight Percent X Chemical Weight Fraction <sup>b</sup>																
Diesel	48%	51%	ND	3.60E-04	2.54E-04	1.22E-04	1.47E-04	8.12E-05	ND	8.62E-04	1.32E-03	0.00E+00	1.14E-03	6.09E-05	2.54E-04	6.19E-04
Gasoline	25%	21%	2.70E-03	0.00E+00	ND	3.14E-04	1.94E-03	2.80E-03	2.99E-04	6.33E-04	ND	1.63E-04	4.43E-03	4.11E-03	1.10E-02	1.03E-02
Jet	27%	28%	ND	5.96E-04	9.08E-05	1.90E-04	4.82E-04	7.09E-05	ND	8.94E-04	9.08E-05	0.00E+00	1.69E-03	ND	6.67E-04	1.88E-03
Transmix Composition, Weight Fraction <sup>b</sup>																
Totals	100%	100%	2.70E-03	9.56E-04	3.44E-04	6.25E-04	2.57E-03	2.95E-03	2.99E-04	2.39E-03	1.41E-03	1.63E-04	7.26E-03	4.17E-03	1.19E-02	1.28E-02

<sup>a</sup> Transmix composition is taken to be a weighted average of the speciated components of the facility's throughput. Weighted throughputs calculated using proposed synthetic minor limits (gal) and the density of each substance (lb/gal).

<sup>b</sup> Transmix composition is calculated, for any given species, by the following formula: Transmix wt% = (wt% in gasoline \* product % gasoline by weight + wt% in diesel \* product % diesel by weight).

Table C-3c. Boise Transmix Properties

Products	Product Volume Percent in Transmix	Product Weight Percent (Liquid)	Product Volume Percent (Liquid)	Product Mole Percent (Liquid)	Product Mole Percent (Vapor)	Liquid MW <sup>a</sup>	Vapor MW <sup>a</sup>	Temp <sup>c</sup> (°F)	Vapor Pressure <sup>c</sup> (psf)	Liquid Density <sup>d</sup> (lb/gal)
Diesel <sup>a</sup>	48%	51%	48%	40.14%	0%	188	130	50.92	0.0045	7.1
Gasoline <sup>a</sup>	25%	21%	25%	33.80%	100%	92	60	50.92	6.8	5.6
Jet <sup>a</sup>	27%	28%	27%	26.06%	0%	162	130	50.92	0.0059	7.0
Total	100%	100%	100%	100%					2.29	6.7
Estimated Transmix Properties <sup>b</sup>						149	60			

<sup>a</sup> Liquid and vapor molecular weights, vapor pressure, and liquid density for gasoline, diesel, and jet kerosene are based on EPA's TANKS 4.0.9d supporting data.

<sup>b</sup> Transmix properties are based on the weighted average of gasoline and diesel properties. Molar weights are weighted by mole percent in vapor and liquid phases. Vapor pressures are weighted based on liquid mole percent. Liquid densities are weighted based on liquid mass percent.

<sup>c</sup> Temp based on daily average ambient temperature for Boise, ID in MET data lookup tables provided with EPA's TANKS 4.0.9d software.

Table C-3d. Vapor Pressure Data

Temperature <sup>a,c</sup> (°F)	Temperature <sup>a,c</sup> (°C)	Temperature <sup>a,c</sup> (°C)	Gasoline <sup>a</sup> (RVP 15, psf)	Diesel <sup>b</sup> (psf)	Jet <sup>b</sup> (psf)	Transmix <sup>a,d</sup> (psf)
40	500	4.63	5.5802	0.0031	0.0041	1.89
50	510	10.18	6.774	0.0045	0.006	2.29
60	520	15.74	8.1621	0.0065	0.0085	2.76
70	530	21.29	9.7656	0.009	0.011	3.31
80	540	26.85	11.6067	0.012	0.015	3.93
90	550	32.41	13.7085	0.016	0.021	4.65
100	560	37.96	16.0948	0.022	0.029	5.46
50.92	510.92	10.69	6.8	0.0045	0.0059	2.29
73.95	533.95	23.49	10.2	0.0095	0.0124	3.44

Data on temperature and vapor pressures obtained from AP-42, Table 7.1-2, and TANKS 4.0.9d default database. As shown in the chart at left, a line is fit to each data set from AP-42. The curve relates vapor pressure to temperature by the following equation:

$$P = A e^{B/T}$$

where A and B are constants. The equations represented in the chart are of the rearranged form,

$$\ln P = \ln A + (B/T)$$

where ln A is the y-intercept of the trend line, and B is the slope. The values are as follows:

	Gasoline RVP 10	Gasoline RVP 15	Diesel	Jet
ln A	-8.06	-7.09	-21.846	-21.426
A	3.16E-04	8.42E-04	3.25E-10	4.95E-10
B	0.0186	0.0176	0.0322	0.0319

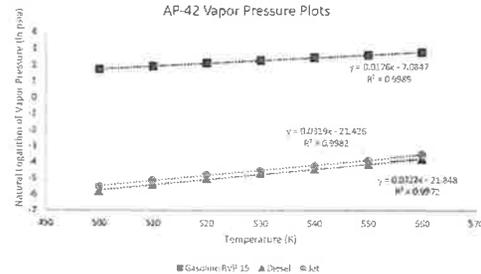
<sup>b</sup> Temperature points on the bottom two rows are the daily average ambient temperatures for Boise, ID in MET data lookup tables provided with EPA's TANKS 4.0.9d software. The bottom row is the daily average of the highest month (July), while the second row from the bottom is the daily average across the year.

<sup>c</sup> Transmix is assumed to be an ideal mixture of gasoline and diesel. Its vapor pressure is treated as the sum of the partial vapor pressures of each species.

<sup>d</sup> Using Antoine's Equation, the following vapor pressure coefficients can be derived from the available vapor pressure and temperature information for transmix:

A	7.006
B	1.659
C	326.2

Antoine coefficients are with reference to the units, P=mmHg, T=°C, used in the equation,  $P = (10^A) \cdot (B / (T + C))$ , consistent with TANKS 4.0.9d.



**Table C-4a. Mass Fraction of Gasoline in Denatured Ethanol**

Product	Volume <sup>a</sup> (vol%)	Volume <sup>b</sup> (100-gal basis)	Density <sup>c</sup> (lb/gal)	Mass <sup>c</sup> (lb/100 gal)	Mass Fraction
Ethanol	96.64	96.64	6.61	638.79	0.9714
Gasoline	3.36	3.36	5.6	18.82	0.0286
Total	100	100		657.61	1.00

<sup>a</sup> Gasoline content can range from 1.96 vol% to 4.76 vol%. Average gasoline volume is 3.36 vol%. This value has historically been accepted by IDEQ. Ethanol content in vol% is 100 vol% less the gasoline content.

<sup>b</sup> Volume presented is for 100 gal of denatured ethanol.

<sup>c</sup> Densities from EPA's TANKS 4.0.9d software. Mass is the mass of each product in 100 gal of denatured ethanol, calculated as the product of density and volume.

<sup>d</sup> Mass fraction is the ratio of product mass to total mass.

**Table C-4b. Composition of Denatured Ethanol**

Species	CAS No.	Gasoline Speciation (wt%)	Denatured Ethanol Speciation (wt%)
Benzene	71-43-2	1.292	0.037
Isopropyl Benzene (Cumene)	98-82-8	0.150	0.004
Ethyl benzene	100-41-4	0.926	0.026
Methanol	67-56-1	0.143	0.004
Hexane (-n)	110-54-3	1.338	0.038
Naphthalene	91-20-3	0.303	0.009
Styrene	100-42-5	0.078	0.002
1,2,4-Trimethyl benzene	95-63-6	2.119	0.061
2,2,4-Trimethylpentane (Isooctane)	540-84-1	1.965	0.056
Toluene	108-88-3	5.248	0.150
Xylenes	1330-20-7	4.911	0.141
Other VOC		81.527	2.333
Ethanol	64-17-5		97.139
<b>TOTAL</b>			<b>100.000</b>

<sup>a</sup> Gasoline speciation based on data from PERF refinery gasoline blending. This data has historically been accepted by IDEQ.

<sup>b</sup> Speciation calculated as the product of the wt% of a species in gasoline and the wt% of gasoline in the mixture. Ethanol content is the product of the wt% of ethanol in denatured ethanol above. Other VOC represent the difference between the partial speciation and 100 wt%.

**Table C-5a. Total Tank Throughputs by Product**

Product	Potential Throughput <sup>a,b</sup> (gal/yr)
Gasoline	730,321,200
Diesel	526,125,600
Jet	526,125,600
Transmix	2,100,000
Ethanol	81,146,800
Wastewater <sup>b</sup>	554,400

<sup>a</sup> Throughput represents the maximum annual throughput of each liquid.

<sup>b</sup> Wastewater throughput is based on two discharges per year at 6,600 bbl/dischARGE.

**Table C-5b. Gasoline Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
12	Gasoline tank	536,340	0.06	41,372,190	77.14
13	Gasoline tank	494,928	0.05	38,177,751	77.14
164	Gasoline tank	486,024	0.05	37,490,914	77.14
165	Gasoline tank	484,680	0.05	37,387,241	77.14
166	Gasoline tank	510,090	0.05	39,347,317	77.14
200	Gasoline tank	2,392,698	0.25	184,567,915	77.14
202	Gasoline tank	1,477,140	0.16	113,943,611	77.14
203	Gasoline tank	1,541,316	0.16	118,894,018	77.14
204	Gasoline tank	710,514	0.08	54,807,622	77.14
208	Gasoline tank	833,994	0.09	64,332,621	77.14
<b>TOTAL</b>		<b>9,467,724</b>	<b>1.00</b>	<b>730,321,200</b>	

<sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.

<sup>b</sup> Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.

<sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5c. Diesel Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
5	Diesel tank	423,696	0.07	34,313,131	80.99
6	Diesel tank	426,636	0.07	34,551,227	80.99
7	Diesel tank	652,050	0.10	52,806,439	80.99
8	Diesel tank	297,612	0.05	24,102,185	80.99
201	Diesel tank	2,572,500	0.40	208,334,581	80.99
205	Diesel tank	708,708	0.11	57,394,902	80.99
206	Diesel tank	720,720	0.11	58,367,697	80.99
207	Diesel tank	694,638	0.11	56,255,439	80.99
<b>TOTAL</b>		<b>6,496,560</b>	<b>1.00</b>	<b>526,125,600</b>	

<sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.

<sup>b</sup> Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.

<sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5d. Jet Fuel Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
1	Jet fuel tank	253,302	0.12	65,472,588	258.48
2	Jet fuel tank	175,182	0.09	45,280,412	258.48
3	Jet fuel tank	174,216	0.09	45,030,724	258.48
4	Jet fuel tank	303,702	0.15	78,499,798	258.48
162	Jet fuel tank	550,200	0.27	142,213,712	258.48
163	Jet fuel tank	578,886	0.28	149,628,366	258.48
<b>TOTAL</b>		<b>2,035,488</b>	<b>1.00</b>	<b>526,125,600</b>	

<sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.

<sup>b</sup>

Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.

<sup>c</sup>

The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5e. Ethanol Throughput by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
209	Ethanol tank	816,774	1.00	81,146,800	99.35

- <sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.
- <sup>b</sup> Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.
- <sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5f. Transmix Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
14	Transmix tank	78,288	1.00	2,100,000	26.82
<b>TOTAL</b>		<b>78,288</b>	<b>1.00</b>	<b>2,100,000</b>	

- <sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.
- <sup>b</sup> Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.
- <sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5g. Wastewater Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
402	Wastewater tank	91,056	0.21	117,469	1.29
403	Wastewater tank	169,344	0.39	218,466	1.29
404	Wastewater tank	169,344	0.39	218,466	1.29
<b>TOTAL</b>		<b>429,744</b>	<b>1.00</b>	<b>554,400</b>	

- <sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.
- <sup>b</sup> Potential throughput is apportioned between tanks by multiplying the tank's fraction of total volume by the total facility-wide throughput (Table C-5a) of the liquid or petroleum product in the tank.
- <sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Given the calculation methodology used to determine the potential throughput of each tank, all tanks in the service of the same liquid or product are expected to have the same throughput.

**Table C-5h. Additive Throughputs by Tank**

Tank #	Product	Working Volume (gal)	Fraction of Total Tank Volume	Potential Throughput (gal/yr)	Turnovers per Year
A201	Additive Tank: OGA 72040	14,700	1	126,000	8.57
A202	Additive Tank: HiTEC 6590	8,200	1	126,000	15.37
A203	Additive Tank: Innospec RT2-W/80	4,700	1	126,000	26.81
A204	Additive Tank: HiTEC 6676	3,000	1	126,000	42.00
A205	Additive Tank: HiTEC 6590	2,500	1	126,000	50.40
A206	Additive Tank: UNISOL Liquid Red BK-50	900	1	126,000	140.00
A207	Additive Tank: NEMO 1122	8,000	1	126,000	15.75
A208	Additive Tank: OLI-9101.x	15,000	1	126,000	8.40

<sup>a</sup> Fractions of total tank volume are calculated as the working volume of a specific tank divided by the total working volume of all tanks in the service of the same liquid or petroleum product.

<sup>b</sup> Potential throughput is based on 2013 Tier I operating permit application. Values are conservatively high.

<sup>c</sup> The number of annual turnovers for a given tank is calculated by dividing the tank's throughput by its working volume. Because fuel additives are not identical products, the number of turnovers per tank may be different for different tanks.

**Table C-5i. Maximum Hourly Throughputs by Product**

Tank <sup>a</sup>	Tank Service	Working Volume (gal)	Short-Term Throughput (gal/hr)	Short-Term Turnovers (/hr)
Boise Tank 01 - Post ST	Jet fuel tank	253,302	60,060	0.237
Boise Tank 04 - Post ST	Jet fuel tank	303,702	72,000	0.237
Boise Tank 05 - Post ST	Diesel tank	423,696	60,060	0.142

<sup>a</sup> Tank 04 throughput is based on the maximum of the hourly withdrawal rates for the loading rack and the hourly fill rate from the incoming fuel by pipeline.

Table C-6a. Annual Tank PTE - VOC and HAP

Tank #	Tank Service	1,2,4- Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isocetane) 540-94-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Ethanol 64-17-5	Ethyl benzene 100-41-4	Nesane (n) 110-54-3	Isopropyl Benzene (Cumene) 98-82-6	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 133-0-7	Unidentified Components	VOC (tpy)
Boise Tank 01 - Post Project	Jet fuel tank	5.72E-03	0.00E+00	0.00E+00	4.02E-05	2.30E-05	--	8.44E-03	2.11E-02	1.50E-03	0.00E+00	3.81E-04	4.68E-05	0.00E+00	3.48E-02	2.75E-02	--	0.31
Boise Tank 02 - Post Project	Jet fuel tank	3.97E-03	0.00E+00	0.00E+00	2.79E-05	1.59E-05	--	5.85E-03	1.46E-02	1.04E-03	0.00E+00	2.64E-04	3.24E-05	0.00E+00	2.42E-02	1.91E-02	--	0.21
Boise Tank 03 - Post Project	Jet fuel tank	4.05E-03	0.00E+00	0.00E+00	2.85E-05	1.63E-05	--	5.98E-03	1.49E-02	1.06E-03	0.00E+00	2.69E-04	3.31E-05	0.00E+00	2.47E-02	1.95E-02	--	0.22
Boise Tank 04 - Post Project	Jet fuel tank	6.37E-03	0.00E+00	0.00E+00	4.48E-05	2.56E-05	--	9.40E-03	2.35E-02	1.67E-03	0.00E+00	4.24E-04	5.20E-05	0.00E+00	3.88E-02	3.06E-02	--	0.34
Boise Tank 05 - Post Project	Diesel tank	2.61E-03	4.03E-03	0.00E+00	1.73E-05	4.10E-05	--	1.77E-03	1.73E-02	6.53E-04	0.00E+00	2.42E-04	4.30E-04	0.00E+00	9.30E-03	6.22E-03	--	0.26
Boise Tank 06 - Post Project	Diesel tank	2.82E-03	4.12E-03	0.00E+00	1.76E-05	4.68E-05	--	1.87E-03	1.75E-02	6.96E-04	0.00E+00	2.67E-04	4.95E-04	0.00E+00	9.62E-03	6.36E-03	--	0.27
Boise Tank 07 - Post Project	Diesel tank	4.42E-03	6.47E-03	0.00E+00	2.77E-05	7.35E-05	--	2.93E-03	2.74E-02	1.89E-03	0.00E+00	4.19E-04	7.77E-04	0.00E+00	1.51E-02	1.03E-02	--	0.42
Boise Tank 08 - Post Project	Diesel tank	1.99E-04	6.98E-05	0.00E+00	5.00E-05	3.57E-05	--	4.79E-05	2.22E-04	2.71E-05	0.00E+00	1.23E-04	1.89E-04	0.00E+00	1.78E-04	1.82E-04	--	0.07
Boise Tank 12 - Post Project	Gasoline tank	1.93E-03	6.91E-03	7.86E-03	0.00E+00	0.00E+00	--	1.23E-03	1.25E-02	1.56E-04	1.07E-03	2.50E-04	0.00E+00	8.98E-05	1.22E-02	6.08E-03	--	2.40
Boise Tank 13 - Post Project	Gasoline tank	1.80E-03	6.79E-03	7.78E-03	0.00E+00	0.00E+00	--	1.17E-03	1.25E-02	1.47E-04	1.06E-03	2.31E-04	0.00E+00	8.48E-05	1.19E-02	5.77E-03	--	2.39
Boise Tank 14 - Post Project	Transmix tank	8.72E-04	1.37E-02	1.73E-02	2.27E-06	3.11E-06	--	1.58E-03	3.07E-02	1.74E-04	2.41E-03	3.61E-05	2.59E-05	6.68E-05	2.19E-02	6.58E-03	--	5.91
Boise Tank 162 - Post Project	Jet fuel tank	1.23E-02	0.00E+00	0.00E+00	8.64E-05	4.93E-05	--	1.81E-02	4.53E-02	3.21E-03	0.00E+00	8.16E-04	1.00E-04	0.00E+00	7.48E-02	5.90E-02	--	0.66
Boise Tank 163 - Post Project	Jet fuel tank	1.26E-02	0.00E+00	0.00E+00	8.66E-05	5.05E-05	--	1.86E-02	4.64E-02	3.29E-03	0.00E+00	8.36E-04	1.03E-04	0.00E+00	7.67E-02	6.05E-02	--	0.67
Boise Tank 164 - Post Project	Gasoline tank	1.75E-03	9.07E-03	1.08E-02	0.00E+00	0.00E+00	--	1.32E-03	1.76E-02	1.52E-04	1.46E-03	2.11E-04	0.00E+00	9.14E-05	1.52E-02	6.38E-03	--	3.44
Boise Tank 165 - Post Project	Gasoline tank	1.63E-03	6.14E-03	7.04E-03	0.00E+00	0.00E+00	--	1.06E-03	1.13E-02	1.33E-04	9.58E-04	2.09E-04	0.00E+00	7.68E-05	1.08E-02	5.22E-03	--	2.17
Boise Tank 166 - Post Project	Gasoline tank	1.70E-03	6.22E-03	7.09E-03	0.00E+00	0.00E+00	--	1.09E-03	1.13E-02	1.38E-04	9.64E-04	2.19E-04	0.00E+00	7.95E-05	1.10E-02	5.39E-03	--	2.17
Boise Tank 200 - Post Project	Gasoline tank	4.02E-03	1.19E-02	1.32E-02	0.00E+00	0.00E+00	--	2.37E-03	2.07E-02	3.16E-04	1.77E-03	5.53E-04	0.00E+00	1.78E-04	2.19E-02	1.19E-02	--	3.89
Boise Tank 201 - Post Project	Diesel tank	1.58E-02	2.31E-02	0.00E+00	9.86E-05	2.63E-04	--	1.05E-02	9.77E-02	3.90E-03	0.00E+00	1.30E-03	2.78E-03	0.00E+00	5.38E-02	3.68E-02	--	1.50
Boise Tank 202 - Post Project	Gasoline tank	3.13E-03	9.72E-03	1.08E-02	0.00E+00	0.00E+00	--	1.87E-03	1.71E-02	2.48E-04	1.46E-03	4.12E-04	0.00E+00	1.40E-04	1.77E-02	9.38E-03	--	3.22
Boise Tank 203 - Post Project	Gasoline tank	3.25E-03	9.83E-03	1.09E-02	0.00E+00	0.00E+00	--	1.93E-03	1.72E-02	2.56E-04	1.47E-03	4.29E-04	0.00E+00	1.44E-04	1.80E-02	9.66E-03	--	3.23
Boise Tank 204 - Post Project	Gasoline tank	2.20E-03	7.03E-03	7.86E-03	0.00E+00	0.00E+00	--	1.33E-03	1.24E-02	1.75E-04	1.06E-03	2.88E-04	0.00E+00	9.91E-05	1.27E-02	6.66E-03	--	2.35
Boise Tank 205 - Post Project	Diesel tank	3.06E-04	5.36E-05	0.00E+00	8.66E-05	6.27E-05	--	5.35E-05	1.85E-04	3.63E-05	0.00E+00	2.14E-04	3.28E-04	0.00E+00	1.52E-04	2.13E-04	--	0.13
Boise Tank 206 - Post Project	Diesel tank	3.11E-04	5.37E-05	0.00E+00	9.01E-05	6.37E-05	--	5.40E-05	1.84E-04	3.64E-05	0.00E+00	2.18E-04	3.34E-04	0.00E+00	1.53E-04	2.15E-04	--	0.13
Boise Tank 207 - Post Project	Diesel tank	5.50E-04	4.25E-04	0.00E+00	8.84E-05	6.55E-05	--	2.20E-04	1.77E-03	9.74E-05	0.00E+00	2.33E-04	3.65E-04	0.00E+00	1.01E-03	7.95E-04	--	0.15
Boise Tank 208 - Post Project	Gasoline tank	2.39E-03	8.20E-03	9.28E-03	0.00E+00	0.00E+00	--	1.49E-03	1.46E-02	1.92E-04	1.26E-03	3.11E-04	0.00E+00	1.10E-04	1.46E-02	7.41E-03	--	2.81
Boise Tank 209 - Post Project	Ethanol tank	9.37E-05	1.49E-04	1.38E-04	0.00E+00	0.00E+00	2.75E-01	4.54E-05	1.98E-04	6.86E-06	1.75E-05	1.31E-05	0.00E+00	3.67E-06	2.27E-04	2.36E-04	--	0.28
Boise Tank 402 - Post Project	Wastewater tank	1.95E-04	2.95E-03	3.71E-03	4.86E-07	7.20E-07	--	3.48E-04	6.54E-03	3.86E-05	3.24E-04	8.20E-06	6.02E-06	1.47E-05	4.75E-03	1.45E-03	--	4.12
Boise Tank 403 - Post Project	Wastewater tank	3.79E-04	5.71E-03	7.19E-03	9.42E-07	1.40E-06	--	6.76E-04	1.27E-02	7.49E-05	1.02E-03	1.59E-05	1.17E-05	2.85E-05	9.21E-03	2.81E-03	--	7.99
Boise Tank 404 - Post Project	Wastewater tank	3.79E-04	5.71E-03	7.19E-03	9.42E-07	1.40E-06	--	6.76E-04	1.27E-02	7.49E-05	1.02E-03	1.59E-05	1.17E-05	2.85E-05	9.21E-03	2.81E-03	--	7.99
Boise Tank A201 - Post Project	Additive Tank: OCA 72040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.03
Boise Tank A202 - Post Project	Additive Tank: HITEC 6590	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.02
Boise Tank A203 - Post Project	Additive Tank: Inospec RT2-W/80	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.02
Boise Tank A204 - Post Project	Additive Tank: HITEC 6676	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.02
Boise Tank A205 - Post Project	Additive Tank: HITEC 6590	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.01
Boise Tank A206 - Post Project	Additive Tank: UNISOL Liquid Red BK-50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.01
Boise Tank A207 - Post Project	Additive Tank: NEMO 1122	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.02
Boise Tank A208 - Post Project	Additive Tank: OLI-9101x	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	--	0.04
<b>TOTAL Tank Emissions</b>		<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.28</b>	<b>0.10</b>	<b>0.54</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.55</b>	<b>0.37</b>	<b>0.00</b>	<b>59.84</b>

\* Tank emissions are calculated using AP-42 Section 7.1 methodologies. A printout of detailed calculations by tank can be found in Appendix D.

Table C-6b: Annual Tank PTE - VOC and HAP Standing Losses for Diesel and Jet Tanks

Tank*	Tank Service	1,2,4- Trimethyl benzene 95-63-6 (tpy)	2,2,4-Trimethyl pentane (isooctane) 540-84-1 (tpy)	Benzene 71-43-2 (tpy)	Biphenyl 92-52-4 (tpy)	Cresol 1319-77-3 (tpy)	Ethanol 64-17-5 (tpy)	Ethyl benzene 100-41-4 (tpy)	Hexane (n) 110-54-3 (tpy)	Isopropyl Benzene (Cumene) 98-82-8 (tpy)	Methanol 67-56-1 (tpy)	Naphthalene 91-20-3 (tpy)	Phenol 108-95-2 (tpy)	Styrene 100-42-5 (tpy)	Toluene 108-88-3 (tpy)	Xylenes 1330-20-7 (tpy)	Unidentified Components -- (tpy)	VOC Emissions, ton (tpy)
Boise Tank 01 - Post Project	Jet fuel tank	1.09E-03	0.00E+00	0.00E+00	7.34E-06	4.51E-06	--	1.58E-03	3.82E-03	2.82E-04	0.00E+00	7.33E-05	9.22E-06	0.00E+00	6.44E-03	5.15E-03	--	0.06
Boise Tank 02 - Post Project	Jet fuel tank	7.26E-04	0.00E+00	0.00E+00	4.89E-06	3.01E-06	--	1.05E-03	2.55E-03	1.88E-04	0.00E+00	4.88E-05	6.14E-06	0.00E+00	4.29E-03	3.43E-03	--	0.04
Boise Tank 03 - Post Project	Jet fuel tank	6.48E-04	0.00E+00	0.00E+00	4.37E-06	2.69E-06	--	9.39E-04	2.27E-03	1.68E-04	0.00E+00	4.36E-05	5.49E-06	0.00E+00	3.83E-03	3.06E-03	--	0.03
Boise Tank 04 - Post Project	Jet fuel tank	9.77E-04	0.00E+00	0.00E+00	6.58E-06	4.05E-06	--	1.42E-03	3.43E-03	2.53E-04	0.00E+00	6.58E-05	8.27E-06	0.00E+00	5.78E-03	4.62E-03	--	0.05
Boise Tank 05 - Post Project	Diesel tank	1.47E-04	2.18E-04	0.00E+00	9.31E-07	2.38E-06	--	9.79E-05	9.25E-04	3.63E-05	0.00E+00	1.38E-05	2.51E-05	0.00E+00	5.07E-04	3.44E-04	--	0.01
Boise Tank 06 - Post Project	Diesel tank	6.82E-04	9.63E-04	0.00E+00	4.10E-06	1.17E-05	--	4.45E-04	4.04E-03	1.67E-04	0.00E+00	6.54E-05	1.24E-04	0.00E+00	2.26E-03	1.56E-03	--	0.06
Boise Tank 07 - Post Project	Diesel tank	1.07E-03	1.51E-03	0.00E+00	6.41E-06	1.82E-05	--	6.96E-04	6.32E-03	2.61E-04	0.00E+00	1.02E-04	1.94E-04	0.00E+00	3.54E-03	2.45E-03	--	0.10
Boise Tank 08 - Post Project	Diesel tank	4.13E-05	6.14E-05	0.00E+00	2.63E-07	6.78E-07	--	2.76E-05	2.61E-04	1.02E-05	0.00E+00	3.90E-06	7.16E-06	0.00E+00	1.43E-04	9.68E-05	--	0.00
Boise Tank 162 - Post Project	Jet fuel tank	1.86E-03	0.00E+00	0.00E+00	1.25E-05	7.69E-06	--	2.69E-03	6.51E-03	4.81E-04	0.00E+00	1.25E-04	1.57E-05	0.00E+00	1.10E-02	8.78E-03	--	0.10
Boise Tank 163 - Post Project	Jet fuel tank	1.87E-03	0.00E+00	0.00E+00	1.26E-05	7.73E-06	--	2.70E-03	6.54E-03	4.83E-04	0.00E+00	1.26E-04	1.58E-05	0.00E+00	1.10E-02	8.82E-03	--	0.10
Boise Tank 201 - Post Project	Diesel tank	4.80E-03	6.78E-03	0.00E+00	2.89E-05	8.20E-05	--	3.13E-03	2.84E-02	1.18E-03	0.00E+00	4.60E-04	8.71E-04	0.00E+00	1.59E-02	1.10E-02	--	0.44
Boise Tank 205 - Post Project	Diesel tank	2.60E-05	3.87E-05	0.00E+00	1.66E-07	4.24E-07	--	1.74E-05	1.45E-04	6.45E-06	0.00E+00	2.45E-06	4.49E-06	0.00E+00	9.00E-05	6.10E-05	--	0.00
Boise Tank 206 - Post Project	Diesel tank	2.59E-05	3.85E-05	0.00E+00	1.65E-07	4.24E-07	--	1.73E-05	1.64E-04	6.42E-06	0.00E+00	2.44E-06	4.47E-06	0.00E+00	8.95E-05	6.07E-05	--	0.00
Boise Tank 207 - Post Project	Diesel tank	2.75E-04	4.10E-04	0.00E+00	1.76E-06	4.50E-06	--	1.84E-04	1.75E-03	6.83E-05	0.00E+00	2.59E-05	4.75E-05	0.00E+00	9.54E-04	6.46E-04	--	0.03
<b>TOTAL Tank Emissions</b>		<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.05</b>	<b>0.00</b>	<b>1.02</b>

\* Tank emissions are calculated using AP-42 Section 7.1 methodologies. A printout of detailed calculations by tank can be found in Appendix D.

Table C-6c. Annual Tank PTE - VOC and HAP Diesel/Jet Scenarios

Liquids	Emission Data	1,2,4-Trimethyl benzene 95-43-6 (tpy)	2,2,4-Trimethyl pentane (Isocane) 540-84-1 (tpy)	Benzene 71-43-2 (tpy)	Biphenyl 92-52-4 (tpy)	Cresol 1319-77-3 (tpy)	Ethanol 64-17-5 (tpy)	Ethyl benzene 100-41-4 (tpy)	Hexane (n) 110-54-3 (tpy)	Isopropyl Benzene (Cumene) 98-82-8 (tpy)	Methanol 67-56-1 (tpy)	Naphthalene 91-20-3 (tpy)	Phenol 108-95-2 (tpy)	Styrene 100-42-5 (tpy)	Toluene 108-88-3 (tpy)	Xylenes 1330-20-7 (tpy)	VOC Emissions, ton (tpy)
Diesel tank	Standing Losses Only	7.06E-03	1.00E-02	0.00E+00	4.27E-05	1.20E-04	0.00E+00	4.62E-03	4.21E-02	1.73E-03	0.00E+00	6.76E-04	1.28E-03	0.00E+00	2.35E-02	1.62E-02	0.65
Diesel tank	Total Losses	2.70E-02	3.83E-02	0.00E+00	4.78E-04	6.52E-04	0.00E+00	1.74E-02	1.62E-01	6.54E-03	0.00E+00	3.22E-03	5.70E-03	0.00E+00	8.94E-02	6.12E-02	2.92
Jet fuel tank	Standing Losses Only	7.16E-03	0.00E+00	0.00E+00	4.83E-05	2.97E-05	0.00E+00	1.04E-02	2.51E-02	1.86E-03	0.00E+00	4.82E-04	6.06E-05	0.00E+00	4.23E-02	3.39E-02	0.37
Jet fuel tank	Total Losses	4.50E-02	0.00E+00	0.00E+00	3.16E-04	1.61E-04	0.00E+00	6.63E-02	1.66E-01	1.18E-02	0.00E+00	2.99E-03	3.67E-04	0.00E+00	2.74E-01	2.16E-01	2.40
All other tanks (gasoline, transmb, ethanol, wastewater, additives)	Total Losses	2.57E-02	1.10E-01	1.28E-01	4.64E-06	6.62E-06	2.75E-01	1.82E-02	2.10E-01	2.28E-03	1.75E-02	3.18E-03	5.53E-05	1.24E-03	1.91E-01	8.77E-02	54.52
All tanks - max diesel throughput	Total Losses	5.99E-02	1.46E-01	1.28E-01	5.31E-04	6.89E-04	2.75E-01	4.60E-02	3.98E-01	1.07E-02	1.75E-02	6.88E-03	5.82E-03	1.24E-03	3.23E-01	1.83E-01	57.81
All tanks - max jet throughput	Total Losses	7.78E-02	1.20E-01	1.28E-01	3.64E-04	3.08E-04	2.75E-01	8.91E-02	4.18E-01	1.58E-02	1.75E-02	6.85E-03	1.70E-03	1.24E-03	4.89E-01	3.20E-01	52.57
<b>Max Scenario</b>		All tanks - max jet throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max jet throughput	All tanks - max jet throughput	All tanks - max jet throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max diesel throughput	All tanks - max jet throughput	All tanks - max jet throughput	All tanks - max diesel throughput
<b>Highest Case Tank Farm PTE</b>		7.78E-02	1.48E-01	1.28E-01	5.31E-04	6.89E-04	2.75E-01	8.91E-02	4.18E-01	1.58E-02	1.75E-02	6.88E-03	5.82E-03	1.24E-03	4.89E-01	3.20E-01	57.81

All tanks (max diesel throughput) = diesel tanks (total losses) + jet tanks (standing losses) + all other tanks.

All tanks (max jet throughput) = diesel tanks (standing losses) + jet tanks (total losses) + all other tanks.

Highest-case tank farm PTE is the higher-emitting case of the two cases above. These cases are evaluated separately for each pollutant.

**Table C-7a. Liquid Speciation of Petroleum Feedstocks**

Stock <sup>a</sup>	1,2,4-Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isooctane) 540-84-1 HAP (wt frac.)	Benzene 71-43-2 HAP (wt frac.)	Biphenyl 92-52-4 HAP (wt frac.)	Cresol 1319-77-3 HAP (wt frac.)	Isopropyl Benzene (Cumene) 98-82-8 HAP (wt frac.)	Ethyl benzene 100-41-4 HAP (wt frac.)	Hexane (n) 110-54-3 HAP (wt frac.)	Methanol 67-56-1 HAP (wt frac.)	Naphthalene 91-20-3 HAP (wt frac.)	Phenol 108-95-2 HAP (wt frac.)	Styrene 100-42-5 HAP (wt frac.)	Toluene 108-88-3 HAP (wt frac.)	Xylenes 1330-20-7 HAP (wt frac.)	Total (wt frac.)
Conventional Gasoline (all grades)	2.12E-02	1.97E-02	1.29E-02	0.00E+00	ND	1.50E-03	9.26E-03	1.34E-02	1.43E-03	3.03E-03	ND	7.80E-04	5.25E-02	4.91E-02	0.185
Diesel No. 2, No. 1, Heating Fuel	2.25E-03	1.20E-04	ND	7.10E-04	5.00E-04	2.40E-04	2.90E-04	1.60E-04	ND	1.70E-03	2.60E-03	0.00E+00	5.00E-04	1.22E-03	0.010
Jet Fuel, Commercial Jet Fuel, JP-8	5.94E-03	ND	ND	2.10E-03	3.20E-04	6.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	3.20E-04	0.00E+00	2.35E-03	6.64E-03	0.023
Transmix <sup>b</sup>	7.26E-03	4.17E-03	2.70E-03	9.56E-04	3.44E-04	6.25E-04	2.57E-03	2.95E-03	2.99E-04	2.39E-03	1.41E-03	1.63E-04	1.19E-02	1.28E-02	0.050

<sup>a</sup> Values reported in weight fractions. Chemical weight fraction from API Publ. 4723, 11/1/2002 (PERF), Section 5.1, pp. 16, 19, and 21.

<sup>b</sup> Transmix weight fractions assumed to be gasoline for conservatism.

**Table C-7b. Molar Masses and Antoine Coefficients by Species**

Parameter	Notation <sup>a</sup>	1,2,4-Trimethyl benzene <sup>b</sup> 95-63-6	2,2,4-Trimethyl pentane <sup>b</sup> 540-84-1	Benzene <sup>c</sup> 71-43-2	Biphenyl <sup>d</sup> 92-52-4	Cresol <sup>e</sup> 1319-77-3	Cumene <sup>e</sup> 98-82-8	Ethyl benzene <sup>e</sup> 100-41-4	n-Hexane <sup>e</sup> 110-54-3	Methanol <sup>e</sup> 67-56-1	Naphthalene <sup>e</sup> 91-20-3	Phenol <sup>e</sup> 108-95-2	Styrene <sup>e</sup> 100-42-5	Toluene <sup>e</sup> 108-88-3	Xylenes <sup>e</sup> 1330-20-7
Molar Mass	MW, lb/lbmol	120.19	114.23	78.11	154.21	108.14	120.19	106.17	86.18	32.04	128.17	94.11	104.15	92.14	106.17
Antoine Coefficients	A, unitless	7.04383	6.8118	6.905	—	7.508	6.93666	6.975	6.876	7.897	7.37	7.133	7.14	6.954	7.009
	B, °C	1573.267	1257.84	1211.033	—	1856.36	1460.793	1424.255	1171.17	1474.08	1968.36	1516.79	1574.51	1344.8	1426.66
	C, °C	208.56	220.74	220.79	—	199.07	207.78	213.21	224.41	229.13	222.61	174.95	224.09	219.48	215.11

<sup>a</sup> MW = molecular weight of component i, lb/lb-mole. Antoine coefficients are with reference to the units, P=mmHg, T=°C, used in the equation, P = 10<sup>A</sup> [A - (B/(T + C))].

<sup>b</sup> Antoine coefficients are found in AP-42 Table 7.1.5, 11/06.

<sup>c</sup> Antoine coefficients are provided in EPA's database of chemical data in TANKS 4.09d.

<sup>d</sup> Antoine coefficients for biphenyl are not available from either of the above sources. Vapor pressure data from Perry's Chemical Engineer's Handbook, 6th edition, Table 3-8, is used to regress a vapor pressure equation.

Table C-7c. Vapor Speciation Calculations by Stock

Stock	Stock Parameters <sup>a</sup>	Species Parameters <sup>b,c</sup>	1,2,4-Trimethylbenzene 95-63-6	2,2,4-Trimethylpentane (Isooctane) 540-84-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Isopropyl Benzene (Cumene) 98-82-8	Ethyl benzene 100-41-4	Hexane (n) 110-54-3	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 1330-20-7	
Conventional Gasoline (all grades)	MW <sub>L</sub> , lb/lbmol	92	P <sub>VAP,L</sub> , psia	1.39E-02	4.51E-01	8.94E-01	3.52E-04	8.49E-04	3.35E-02	7.76E-02	1.49E+00	1.07E+00	1.61E-03	1.71E-03	5.13E-02	2.45E-01	9.27E-02
	MW <sub>V</sub> , lb/lbmol	60	P <sub>L</sub> , psia	2.25E-04	7.14E-03	1.36E-02	0.00E+00	0.00E+00	3.85E-05	6.23E-04	2.13E-02	4.37E-03	3.50E-06	0.00E+00	3.53E-05	1.28E-02	3.94E-03
	P <sub>VAP</sub> , psia	6.77	x <sub>i</sub>	1.62E-02	1.58E-02	1.52E-02	0.00E+00	0.00E+00	1.15E-03	8.02E-03	1.43E-02	4.11E-03	2.17E-03	0.00E+00	6.89E-04	5.24E-02	4.26E-02
	T <sub>LAVG</sub> , °C	10.33	y <sub>i</sub>	3.33E-05	1.06E-03	2.01E-03	0.00E+00	0.00E+00	5.69E-06	9.20E-05	3.14E-03	6.46E-04	5.17E-07	0.00E+00	5.22E-06	1.89E-03	5.83E-04
Diesel No. 2, No. 1, Heating Fuel	MW <sub>L</sub> , lb/lbmol	188	P <sub>VAP,L</sub> , psia	1.39E-02	4.51E-01	8.94E-01	3.52E-04	8.49E-04	3.35E-02	7.76E-02	1.49E+00	1.07E+00	1.61E-03	1.71E-03	5.13E-02	2.45E-01	9.27E-02
	MW <sub>V</sub> , lb/lbmol	130	P <sub>L</sub> , psia	4.89E-05	8.92E-05	0.00E+00	3.04E-07	7.38E-07	1.26E-05	3.99E-05	5.20E-04	0.00E+00	4.01E-06	8.88E-06	0.00E+00	2.50E-04	2.00E-04
	P <sub>VAP</sub> , psia	0.0045	x <sub>i</sub>	3.52E-03	1.97E-04	0.00E+00	8.66E-04	8.69E-04	3.75E-04	5.14E-04	3.49E-04	0.00E+00	2.49E-03	5.19E-03	0.00E+00	1.02E-03	2.16E-03
	T <sub>LAVG</sub> , °C	10.33	y <sub>i</sub>	1.06E-02	1.97E-02	0.00E+00	6.71E-05	1.63E-04	2.78E-03	8.79E-03	1.15E-01	0.00E+00	8.84E-04	1.96E-03	0.00E+00	5.51E-02	4.42E-02
Jet Fuel, Commercial Jet Fuel, JP-8	MW <sub>L</sub> , lb/lbmol	162	P <sub>VAP,L</sub> , psia	1.39E-02	4.51E-01	8.94E-01	3.52E-04	8.49E-04	3.35E-02	7.76E-02	1.49E+00	1.07E+00	1.61E-03	1.71E-03	5.13E-02	2.45E-01	9.27E-02
	MW <sub>V</sub> , lb/lbmol	130	P <sub>L</sub> , psia	1.11E-04	0.00E+00	0.00E+00	7.76E-07	4.07E-07	3.03E-05	2.01E-04	7.00E-04	0.00E+00	6.40E-06	9.42E-07	0.00E+00	1.01E-03	9.39E-04
	P <sub>VAP</sub> , psia	0.0059	x <sub>i</sub>	8.01E-03	0.00E+00	0.00E+00	2.21E-03	4.79E-04	9.03E-04	2.59E-03	4.70E-04	0.00E+00	3.98E-03	5.51E-04	0.00E+00	4.13E-03	1.01E-02
	T <sub>LAVG</sub> , °C	10.33	y <sub>i</sub>	1.88E-02	0.00E+00	0.00E+00	1.31E-04	6.87E-05	5.11E-03	3.39E-02	1.18E-01	0.00E+00	1.08E-03	1.59E-04	0.00E+00	1.70E-01	1.58E-01
Transmix	MW <sub>L</sub> , lb/lbmol	149	P <sub>VAP,L</sub> , psia	1.39E-02	4.51E-01	8.94E-01	3.52E-04	8.49E-04	3.35E-02	7.76E-02	1.49E+00	1.07E+00	1.61E-03	1.71E-03	5.13E-02	2.45E-01	9.27E-02
	MW <sub>V</sub> , lb/lbmol	60	P <sub>L</sub> , psia	1.25E-04	2.45E-03	4.60E-03	3.24E-07	4.03E-07	2.60E-05	2.79E-04	7.58E-03	1.48E-03	4.46E-06	3.81E-06	1.19E-05	4.70E-03	1.66E-03
	P <sub>VAP</sub> , psia	2.29	x <sub>i</sub>	8.98E-03	5.43E-03	5.14E-03	9.22E-04	4.74E-04	7.74E-04	3.59E-03	5.09E-03	1.39E-03	2.77E-03	2.23E-03	2.33E-04	1.92E-02	1.79E-02
	T <sub>LAVG</sub> , °C	10.33	y <sub>i</sub>	5.44E-05	1.07E-03	2.01E-03	1.42E-07	1.76E-07	1.13E-05	1.22E-04	3.31E-03	6.45E-04	1.95E-06	1.66E-06	5.21E-06	2.05E-03	7.24E-04
		Z <sub>L,V</sub>	1.09E-04	2.03E-03	2.61E-03	3.63E-07	3.16E-07	2.27E-05	2.15E-04	4.75E-03	3.44E-04	4.15E-06	2.60E-06	9.03E-06	3.14E-03	1.28E-03	

<sup>a</sup> MW<sub>L</sub> = molecular weight of liquid stock, lb/lbmol

MW<sub>V</sub> = molecular weight of vapor stock, lb/lbmol

P<sub>VAP</sub> = total vapor pressure of liquid mixture, psia

T<sub>LAVG</sub> = average liquid surface temperature, degrees C

A complete list of parameters is provided in Tables C-6a through C-6d.

<sup>b</sup> P<sub>VAP,L</sub> = vapor pressure of component l at liquid surface temperature, psia

P<sub>L</sub> = partial pressure of component l, psia

x<sub>i</sub> = liquid mole fraction of component i, lbmol/lbmol

y<sub>i</sub> = vapor mole fraction of component i, lbmol/lbmol

Z<sub>L,V</sub> = weight fraction of component i in the vapor, lb/lb

<sup>c</sup> Calculation methodology, referenced from AP-42 Section 7.1, in order of computation:

$$P_{VAP,L} = (10^{(A - (B/(T_{LAVG} + C)))}) (0.0193368 \text{ psia/mm Hg})$$

$$x_i = ((\text{Liquid wt.\% component } i) / (MW_L)) / M$$

$$P_L = (P_{VAP,L})(x_i)$$

$$y_i = P_L / P_{VAP}$$

$$Z_{L,V} = (y_i (M_i)) / MW_V = (10^{(A - (B/(T_{LAVG} + C)))}) (0.0193368 \text{ psia/mm Hg}) (i \text{ liquid wt.\% } i) (MW_L / P_{VAP} / MW_V)$$

**Table C-7d. Regressed Vapor Pressure for Biphenyl**

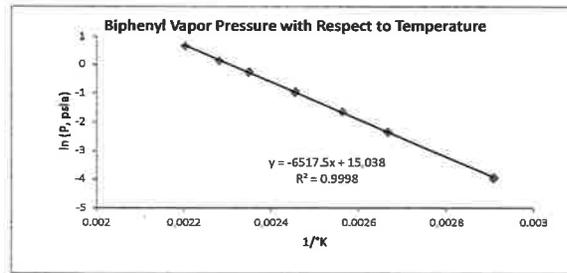
Temperature (°C)	Vapor Pressure (mmHg)	Vapor Pressure (psia)	1/T	ln P <sub>VAP</sub>	Regressed Vapor Pressure Parameters
70.6	1	0.02	0.002909091	-3.945470939	$\ln P_{VAP,i} = A - B/T$ A= 15.038 B= 6517.5 T <sub>LAVE</sub> (C) = 10.33 T <sub>LAVE</sub> (K) = 283.477778 P <sub>VAP,i</sub> (psia) = 3.52E-04
101.8	5	0.10	0.002667022	-2.336033027	
117.0	10	0.19	0.002563117	-1.642885847	
134.2	20	0.39	0.002454891	-0.949738666	
152.5	40	0.77	0.002349348	-0.256591485	
165.2	60	1.16	0.002281282	0.148873623	
180.7	100	1.93	0.002203371	0.659699246	

<sup>a</sup> Data from Perry's Chemical Engineer's Handbook, 6th edition, Table 3-8

<sup>b</sup> Using Antoine's Equation, the following vapor pressure coefficients can be derived from the available vapor pressure and temperature information for biphenyl:

A	7.713
B	2,441
C	246.6

Antoine coefficients are with reference to the units, P=mmHg, T=°C, used in the equation,  $P = (10^{(A - (B/(T + C))}))$ , consistent with TANKS 4.0.9d.



**Table C-7e. Vapor Speciation by Stock**

Stock <sup>a</sup>	1,2,4-Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isooctane) 540-84-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Isopropyl Benzene (Cumene) 98-82-8	Ethyl benzene 100-41-4	Hexane (n) 110-54-3	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 1330-20-7	Total
<b>Liquid Weight Fractions</b>															
Conventional Gasoline (all grades)	2.12E-02	1.97E-02	1.29E-02	ND	ND	1.50E-03	9.26E-03	1.34E-02	1.43E-03	3.03E-03	ND	7.80E-04	5.25E-02	4.91E-02	0.185
Diesel No. 2, No. 1, Heating Fuel	2.25E-03	1.20E-04	ND	7.10E-04	5.00E-04	2.40E-04	2.90E-04	1.60E-04	ND	1.70E-03	2.60E-03	5.00E-04	1.22E-03	0.010	
Jet Fuel, Commercial Jet Fuel, JP-8	5.94E-03	ND	ND	2.10E-03	3.20E-04	6.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	3.20E-04	2.35E-03	6.64E-03	0.023	
Transmix	7.26E-03	4.17E-03	2.70E-03	9.56E-04	3.44E-04	6.25E-04	2.57E-03	2.95E-03	2.99E-04	2.39E-03	1.41E-03	1.63E-04	1.19E-02	1.28E-02	0.050
Most Conservative Diesel/Jet	5.94E-03	1.20E-04	2.10E-03	5.00E-04	6.70E-04	1.70E-03	2.50E-04	3.15E-03	2.60E-03	2.35E-03	6.64E-03	2.35E-03	6.64E-03	0.026	
<b>Vapor Weight Fractions</b>															
Conventional Gasoline (all grades)	6.67E-05	2.01E-03	2.62E-03	1.14E-05	1.63E-04	4.52E-03	3.45E-04	1.10E-06	9.06E-06	2.91E-03	1.03E-03	0.014			
Diesel No. 2, No. 1, Heating Fuel	9.97E-03	1.73E-02	7.96E-05	1.36E-04	2.57E-03	7.18E-03	7.60E-02	8.72E-04	1.42E-03	3.90E-02	3.61E-02	0.191			
Jet Fuel, Commercial Jet Fuel, JP-8	1.73E-02	1.55E-04	5.71E-05	4.72E-03	2.77E-02	7.83E-02	1.06E-03	1.15E-04	1.21E-01	1.29E-01	0.380				
Transmix	1.09E-04	2.03E-03	2.61E-03	3.63E-07	3.16E-07	2.27E-05	2.15E-04	4.75E-03	3.44E-04	4.15E-06	2.60E-06	9.03E-06	3.14E-03	1.28E-03	0.015
Most Conservative Diesel/Jet	1.73E-02	1.73E-02	1.55E-04	1.36E-04	4.72E-03	2.77E-02	7.83E-02	1.06E-03	1.42E-03	1.21E-01	1.29E-01	0.380			

<sup>a</sup> Values reported in weight fractions. Vapor weight fractions are calculated in Table C-7c. Liquid weight fractions reproduced for reference from Table C-7a.

Table C-8a. Liquid Speciation of Petroleum Feedstocks

Stock <sup>a</sup>	1,2,4-Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isocane) 540-84-1 HAP (wt frac.)	Benzene 71-43-2 HAP (wt frac.)	Biphenyl 92-52-4 HAP (wt frac.)	Cresol 1319-77-3 HAP (wt frac.)	Isopropyl Benzene (Cumene) 98-82-8 HAP (wt frac.)	Ethyl benzene 100-41-4 HAP (wt frac.)	Hexane (-n) 110-54-3 HAP (wt frac.)	Methanol 67-56-1 HAP (wt frac.)	Naphthalene 91-20-3 HAP (wt frac.)	Phenol 108-95-2 HAP (wt frac.)	Styrene 100-42-5 HAP (wt frac.)	Toluene 108-88-3 HAP (wt frac.)	Xylenes 1330-20-7 HAP (wt frac.)	Total (wt frac.)
Conventional Gasoline (all grades)	2.12E-02	1.97E-02	1.29E-02	0.00E+00	ND	1.50E-03	9.26E-03	1.34E-02	1.43E-03	3.03E-03	ND	7.80E-04	5.25E-02	4.91E-02	0.185
Diesel No. 2, No. 1, Heating Fuel	2.25E-03	1.20E-04	ND	7.10E-04	5.00E-04	2.40E-04	2.90E-04	1.60E-04	ND	1.70E-03	2.60E-03	0.00E+00	5.00E-04	1.22E-03	0.010
Jet Fuel, Commercial Jet Fuel, JP-8	5.94E-03	ND	ND	2.10E-03	3.20E-04	6.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	3.20E-04	0.00E+00	2.35E-03	6.64E-03	0.023
Tranmix <sup>b</sup>	7.26E-03	4.17E-03	2.70E-03	9.56E-04	3.44E-04	6.25E-04	2.57E-03	2.95E-03	2.99E-04	2.39E-03	1.41E-03	1.63E-04	2.19E-02	1.28E-02	0.050

<sup>a</sup> Values reported in weight fractions. Chemical weight fraction from API Publ. 4723, 11/1/2002 (PERP), Section 5.1, pp. 16, 19, and 21.

<sup>b</sup> Tranmix weight fractions assumed to be gasoline for conservatism.

Table C-8b. Molar Masses and Antoine Coefficients by Species

Parameter	Notation <sup>a</sup>	1,2,4-Trimethyl benzene <sup>b</sup> 95-63-6	2,2,4-Trimethyl pentane <sup>b</sup> 540-84-1	Benzene <sup>c</sup> 71-43-2	Biphenyl <sup>d</sup> 92-52-4	Cresol <sup>e</sup> 1319-77-3	Cumene <sup>c</sup> 98-82-8	Ethyl benzene <sup>c</sup> 100-41-4	n-Hexane <sup>c</sup> 110-54-3	Methanol <sup>c</sup> 67-56-1	Naphthalene <sup>c</sup> 91-20-3	Phenol <sup>c</sup> 108-95-2	Styrene <sup>c</sup> 100-42-5	Toluene <sup>c</sup> 108-88-3	Xylenes <sup>c</sup> 1330-20-7
Molar Mass	MW, lb/lbmol	120.19	114.23	78.11	154.21	108.14	120.19	106.17	86.18	32.04	128.17	94.11	104.15	92.14	106.17
Antoine Coefficients	A, unitless	7.04383	6.8118	6.905	--	7.508	6.93666	6.975	6.876	7.897	7.37	7.133	7.14	6.954	7.009
	B, °C	1573.267	1257.84	1211.033	--	1856.36	1460.793	1424.255	1171.17	1474.08	1968.36	1516.79	1574.51	1344.8	1462.266
	C, °C	208.56	220.74	220.79	--	199.07	207.78	213.21	224.41	229.13	222.61	174.95	224.09	219.48	215.11

<sup>a</sup> MW<sub>i</sub> = molecular weight of component i, lb/lb-mole. Antoine coefficients are with reference to the units, P=mmHg, T=°C, used in the equation,  $P = 10^{(A - (B/(T + C)))}$ .

<sup>b</sup> Antoine coefficients are found in AP-42 Table 7.1.5, 11/06.

<sup>c</sup> Antoine coefficients are provided in EPA's database of chemical data (n TANKS 4.09d).

<sup>d</sup> Antoine coefficients for biphenyl are not available from either of the above sources. Vapor pressure data from Perry's Chemical Engineer's Handbook, 6th edition, Table 3-8, is used to regress a vapor pressure equation.

Table C-9c. Vapor Speciation Calculations by Stock

Stock	Stock Parameters <sup>a</sup>	Species Parameters <sup>b,c</sup>	1,2,4-Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isocotane) 540-84-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Isopropyl Benzene (Cumene) 98-82-8	Ethyl benzene 100-41-4	Hexane (n) 110-54-3	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 1330-20-7
Conventional Gasoline (all grades)	MW <sub>L</sub> , lb/lbmol	P <sub>VAP,i</sub> , psia	3.51E-02	8.79E-01	1.70E+00	9.62E-04	2.80E-03	7.97E-02	1.74E-01	2.72E+00	2.21E+00	4.49E-03	5.87E-03	1.15E-01	5.03E-01	1.45E-01
	MW <sub>V</sub> , lb/lbmol	P <sub>i</sub> , psia	5.69E-04	1.39E-02	2.58E-02	0.00E+00	0.00E+00	9.15E-05	1.39E-03	3.88E-02	9.07E-03	9.76E-06	0.00E+00	7.95E-05	2.63E-02	6.18E-03
	P <sub>VAP</sub> , psia	x <sub>i</sub>	1.62E-02	1.58E-02	1.52E-02	0.00E+00	0.00E+00	1.15E-03	8.02E-03	1.43E-02	4.11E-03	2.17E-03	0.00E+00	6.89E-04	5.24E-02	4.26E-02
	T <sub>LAvg</sub> , °C	y <sub>i</sub>	5.60E-05	1.37E-03	2.55E-03	0.00E+00	0.00E+00	9.02E-06	1.37E-04	3.83E-03	8.93E-04	9.62E-07	0.00E+00	7.83E-06	2.60E-03	6.09E-04
Diesel No. 2, No. 1, Heating Fuel	MW <sub>L</sub> , lb/lbmol	Z <sub>i,V</sub>	1.12E-04	2.61E-03	3.32E-03	0.00E+00	0.00E+00	1.81E-05	2.43E-04	5.50E-03	4.77E-04	2.05E-06	0.00E+00	1.36E-05	3.99E-03	1.08E-03
	MW <sub>V</sub> , lb/lbmol	P <sub>VAP,i</sub> , psia	3.51E-02	8.79E-01	1.70E+00	9.62E-04	2.80E-03	7.97E-02	1.74E-01	2.72E+00	2.21E+00	4.49E-03	5.87E-03	1.15E-01	5.03E-01	1.45E-01
	P <sub>VAP</sub> , psia	P <sub>i</sub> , psia	1.23E-04	1.74E-04	0.00E+00	8.32E-07	2.43E-06	2.99E-05	8.91E-05	9.49E-04	0.00E+00	1.12E-05	3.05E-05	0.00E+00	5.13E-04	3.14E-04
	T <sub>LAvg</sub> , °C	x <sub>i</sub>	3.52E-03	1.97E-04	0.00E+00	8.66E-04	8.69E-04	3.75E-04	5.14E-04	3.49E-04	0.00E+00	2.49E-03	5.19E-03	0.00E+00	1.02E-03	2.16E-03
Jet Fuel, Commercial Jet Fuel, JP-8	MW <sub>L</sub> , lb/lbmol	y <sub>i</sub>	1.30E-02	1.82E-02	0.00E+00	8.75E-05	2.55E-04	3.15E-03	9.37E-03	9.98E-02	0.00E+00	1.18E-03	3.20E-03	0.00E+00	5.39E-02	3.30E-02
	MW <sub>V</sub> , lb/lbmol	Z <sub>i,V</sub>	1.20E-02	1.60E-02	0.00E+00	1.04E-04	2.12E-04	2.91E-03	7.65E-03	6.61E-02	0.00E+00	1.16E-03	2.32E-03	0.00E+00	3.82E-02	2.69E-02
	P <sub>VAP</sub> , psia	P <sub>VAP,i</sub> , psia	3.51E-02	8.79E-01	1.70E+00	9.62E-04	2.80E-03	7.97E-02	1.74E-01	2.72E+00	2.21E+00	4.49E-03	5.87E-03	1.15E-01	5.03E-01	1.45E-01
	T <sub>LAvg</sub> , °C	P <sub>i</sub> , psia	2.81E-04	0.00E+00	0.00E+00	2.12E-06	1.34E-06	7.20E-05	4.50E-04	1.28E-03	0.00E+00	1.79E-05	3.23E-06	0.00E+00	2.08E-03	1.47E-03
Transmix	MW <sub>L</sub> , lb/lbmol	x <sub>i</sub>	8.01E-03	0.00E+00	0.00E+00	2.21E-03	4.79E-04	9.03E-04	2.59E-03	4.70E-04	0.00E+00	3.98E-03	5.51E-04	0.00E+00	4.13E-03	1.01E-02
	MW <sub>V</sub> , lb/lbmol	y <sub>i</sub>	2.27E-02	0.00E+00	0.00E+00	1.72E-04	1.08E-04	5.82E-03	3.64E-02	1.03E-01	0.00E+00	1.45E-03	2.62E-04	0.00E+00	1.68E-01	1.19E-01
	P <sub>VAP</sub> , psia	Z <sub>i,V</sub>	2.10E-02	0.00E+00	0.00E+00	2.04E-04	9.02E-05	5.38E-03	2.97E-02	6.85E-02	0.00E+00	1.43E-03	1.89E-04	0.00E+00	1.19E-01	9.72E-02
	T <sub>LAvg</sub> , °C	P <sub>VAP,i</sub> , psia	3.51E-02	8.79E-01	1.70E+00	9.62E-04	2.80E-03	7.97E-02	1.74E-01	2.72E+00	2.21E+00	4.49E-03	5.87E-03	1.15E-01	5.03E-01	1.45E-01
Transmix	MW <sub>L</sub> , lb/lbmol	P <sub>i</sub> , psia	3.15E-04	4.77E-03	8.74E-03	8.87E-07	1.32E-06	6.17E-05	6.24E-04	1.38E-02	3.06E-03	1.25E-05	1.31E-05	2.69E-05	9.65E-03	2.60E-03
	MW <sub>V</sub> , lb/lbmol	x <sub>i</sub>	8.98E-03	5.43E-03	5.14E-03	9.22E-04	4.74E-04	7.74E-04	3.59E-03	5.09E-03	1.39E-03	2.77E-03	2.23E-03	2.33E-04	1.92E-02	1.79E-02
	P <sub>VAP</sub> , psia	y <sub>i</sub>	9.16E-05	1.39E-03	2.54E-03	2.58E-07	3.85E-07	1.80E-05	1.81E-04	4.03E-03	8.91E-04	3.62E-06	3.81E-06	7.81E-06	2.81E-03	7.56E-04
	T <sub>LAvg</sub> , °C	Z <sub>i,V</sub>	1.83E-04	2.64E-03	3.30E-03	6.62E-07	6.93E-07	3.59E-05	3.21E-04	5.77E-03	4.75E-04	7.72E-06	5.96E-06	1.35E-05	4.30E-03	1.34E-03

<sup>a</sup> MW<sub>L</sub> = molecular weight of liquid stock, lb/lbmol.

MW<sub>V</sub> = molecular weight of vapor stock, lb/lbmol.

P<sub>VAP</sub> = total vapor pressure of liquid mixture, psia

T<sub>LAvg</sub> = average liquid surface temperature, degrees C

A complete list of parameters is provided in Tables C-6a through C-6d.

<sup>b</sup> P<sub>VAP,i</sub> = vapor pressure of component i at liquid surface temperature, psia

P<sub>i</sub> = partial pressure of component i, psia

x<sub>i</sub> = liquid mole fraction of component i, lbmol/lbmol

y<sub>i</sub> = vapor mole fraction of component i, lbmol/lbmol

Z<sub>i,V</sub> = weight fraction of component i in the vapor, lb/lb

<sup>c</sup> Calculation methodology, referenced from AP-42 Section 7.1, in order of computation:

$$P_{VAP,i} = (10^{(A - (B/(T_{LAvg} + C)))}) (0.0193368 \text{ psia/mm Hg})$$

$$x_i = ((\text{Liquid wt\% component } i)(MW_i)) / M$$

$$P_i = (P_{VAP,i})(x_i)$$

$$y_i = P_i / P_{VAP}$$

$$Z_{i,V} = (y_i (M_i)) / MW_v = (10^{(A - (B/(T_{LAvg} + C)))} (0.0193368 \text{ psia/mm Hg}) (i \text{ liquid wt\% } i) (MW_i) / P_{VAP} / MW_v$$

Table C-8d. Regressed Vapor Pressure for Biphenyl

Temperature (°C)	Vapor Pressure (mmHg)	Vapor Pressure (psia)	1/T	ln P <sub>VAP</sub>	Regressed Vapor Pressure Parameters
70.6	1	0.02	0.002909091	-3.945470939	ln P <sub>VAP</sub> = A - B/T A = 15.038 B = 6517.5 T <sub>LAVG</sub> (C) = 23.31 T <sub>LAVG</sub> (K) = 296.455556 P <sub>VAP</sub> (psia) = 9.62E-04
101.8	5	0.10	0.002667022	-2.336033027	
117.0	10	0.19	0.002563117	-1.642885847	
134.2	20	0.39	0.002454891	-0.949738666	
152.5	40	0.77	0.002349348	-0.256591485	
165.2	60	1.16	0.002281282	0.148873623	
180.7	100	1.93	0.002203371	0.659699246	

\* Data from Perry's Chemical Engineer's Handbook, 6th edition, Table 3-8

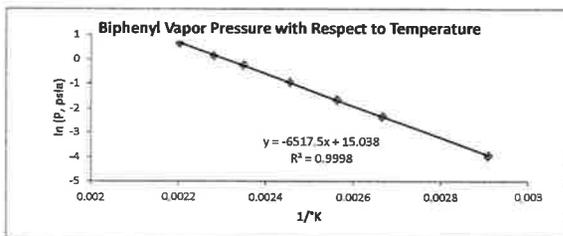


Table C-8e. Vapor Speciation by Stock

Stock <sup>a</sup>	1,2,4-Trimethyl benzene 95-63-6	2,2,4-Trimethyl pentane (Isooctane) 540-84-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Isopropyl Benzene (Cumene) 98-82-8	Ethyl benzene 100-41-4	Hexane (n-) 110-54-3	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 1330-20-7	Total
<b>Liquid Weight Fractions</b>															
Conventional Gasoline (all grades)	2.12E-02	1.97E-02	1.29E-02	ND	ND	1.50E-03	9.26E-03	1.34E-02	1.43E-03	3.03E-03	ND	7.80E-04	5.25E-02	4.91E-02	0.185
Diesel No. 2, No. 1, Heating Fuel	2.25E-03	1.20E-04	ND	7.10E-04	5.00E-04	2.40E-04	2.90E-04	1.60E-04	ND	1.70E-03	2.60E-03	ND	5.00E-04	1.22E-03	0.010
Jet Fuel, Commercial Jet Fuel, JP-8	5.94E-03	ND	ND	2.10E-03	3.20E-04	6.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	3.20E-04	ND	2.35E-03	6.64E-03	0.023
Transmix	7.26E-03	4.17E-03	2.70E-03	9.56E-04	3.44E-04	6.25E-04	2.57E-03	2.95E-03	2.99E-04	2.39E-03	1.41E-03	1.63E-04	1.19E-02	1.28E-02	0.050
Most Conservative Diesel/Jet	5.94E-03	1.20E-04	ND	2.10E-03	5.00E-04	6.70E-04	1.70E-03	2.50E-04	ND	3.15E-03	2.60E-03	ND	2.35E-03	6.64E-03	0.026
<b>Vapor Weight Fractions</b>															
Conventional Gasoline (all grades)	1.12E-04	2.61E-03	3.32E-03	1.04E-04	2.12E-04	1.81E-05	2.43E-04	5.50E-03	4.77E-04	2.05E-06	ND	1.36E-05	3.99E-03	1.08E-03	0.017
Diesel No. 2, No. 1, Heating Fuel	1.20E-02	1.60E-02	ND	1.04E-04	2.12E-04	2.91E-03	7.65E-03	6.61E-02	ND	1.16E-03	2.32E-03	ND	3.82E-02	2.69E-02	0.174
Jet Fuel, Commercial Jet Fuel, JP-8	2.10E-02	ND	ND	2.04E-04	9.02E-05	5.38E-03	2.97E-02	6.85E-02	ND	1.43E-03	1.89E-04	ND	1.19E-01	9.72E-02	0.343
Transmix	1.83E-04	2.64E-03	3.30E-03	6.62E-07	6.93E-07	3.59E-05	3.21E-04	5.77E-03	4.75E-04	7.72E-06	5.96E-06	1.35E-05	4.30E-03	1.34E-03	0.018
Most Conservative Diesel/Jet	2.10E-02	1.60E-02	ND	2.04E-04	2.12E-04	5.38E-03	2.97E-02	6.85E-02	ND	1.43E-03	2.32E-03	ND	1.19E-01	9.72E-02	0.361

\* Values reported in weight fractions. Vapor weight fractions are calculated in Table C-8c. Liquid weight fractions reproduced for reference from Table C-8a.

**Table C-9. Oil-Water Separator and Fugitive Equipment Leaks PTE - VOC**

Source	Service	EF <sup>a</sup>	EF	Number of Units	VOC Emissions <sup>b</sup>	
		(kg/hr/source)	(lb/hr/source)		(lb/hr)	(ton/yr)
Valves	Vapor	1.3E-05	2.9E-05	100	0.00	0.01
Valves	Liquid	4.3E-05	9.5E-05	2,131	0.20	0.88
Fittings	Vapor	4.2E-05	9.3E-05	100	0.01	0.04
Fittings	Liquid	8.0E-06	1.8E-05	10,655	0.19	0.82
Pump Seals	Liquid	5.4E-04	1.2E-03	52	0.06	0.27
Others	Liquid	1.3E-04	2.9E-04	150	0.04	0.19
Source	Service	EF <sup>c</sup>		Throughput	VOC Emissions <sup>d</sup>	
		lb/1000 gal		bbl/yr	(lb/hr)	(ton/yr)
Separator	Liquid	0.2		100,000	0.10	0.42
<b>TOTAL</b>					<b>0.60</b>	<b>2.64</b>

<sup>a</sup> Emission factors from Protocol for Equipment Leak Emission Estimates, Table 2-3 Marketing Terminal Average Emission Factors, EPA-453/R-95-017, November 1995.

<sup>b</sup> Equipment Leak Emissions, lb/hr = (# of units)(EF, lb/hr/source)(24 hr/day), ton/yr = (lb/day)(365 day/yr)(ton/2000 lb)

<sup>c</sup> Emission factor for covered oil/water separator: AP-42, Section 5.1 Petroleum Refining, Table 5.1-2 Fugitive Emissions Factors for Petroleum Refineries, January 1995.

<sup>d</sup> Separator Emissions, ton/yr = (throughput, bbl/yr)(EF, lb/1000 gal)(42/1000 gal/bbl)(ton/2000 lb), lb/yr=(ton/yr)(2000 lb/ton)(yr/365 day)

Table C-10. Fugitive Equipment Leaks PTE - HAPs

Equipment Leak Fugitives <sup>a,b</sup>		VOC (tpy)	1,2,4- Trimethyl benzene 95-63-6 (tpy)	2,2,4- Trimethyl pentane (Isooctane) 540-84-1 (tpy)	Benzene 71-43-2 (tpy)	Biphenyl 92-52-4 (tpy)	Cresol 1319-77-3 (tpy)	Ethyl benzene 100-41-4 (tpy)	Hexane (n) 110-54-3 (tpy)	Isopropyl Benzene (Cumene) 98-82-8 (tpy)	Methanol 67-56-1 (tpy)	Naphthalene 91-20-3 (tpy)	Phenol 108-95-2 (tpy)	Styrene 100-42-5 (tpy)	Toluene 108-88-3 (tpy)	Xylenes 1330-20-7 (tpy)	Total HAP (tpy)
Equip Leak	Liquid	2.59	5.48E-02	5.08E-02	3.34E-02	0.00E+00	0.00E+00	2.40E-02	3.46E-02	3.88E-03	3.70E-03	7.84E-03	0.00E+00	2.02E-03	1.36E-01	1.27E-01	0.42
Equip Leak	Vapor	0.05	3.54E-06	1.07E-04	1.39E-04	0.00E+00	0.00E+00	8.65E-06	2.40E-04	6.05E-07	1.83E-05	5.86E-08	0.00E+00	4.81E-07	1.55E-04	5.48E-05	0.00
<b>TOTAL</b>		<b>2.64</b>	<b>5.48E-02</b>	<b>5.10E-02</b>	<b>3.36E-02</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>2.40E-02</b>	<b>3.49E-02</b>	<b>3.88E-03</b>	<b>3.72E-03</b>	<b>7.84E-03</b>	<b>0.00E+00</b>	<b>2.02E-03</b>	<b>1.36E-01</b>	<b>1.27E-01</b>	<b>0.42</b>

<sup>a</sup> HAP emissions from existing equipment leaks are calculated using the liquid and vapor speciations computed for gasoline in Table C-7e, which is the most conservative speciation.

<sup>b</sup> HAP emissions from future equipment leaks are calculated using the liquid and vapor speciations computed for the most conservative speciation between diesel and jet, as shown in Table C-7e.

**Table C-11a. Loading Rack and VCU - VOC, CO, and NO<sub>x</sub>**

Product	Quantity Loaded <sup>a</sup> (Mgal/yr)	VOC Emission Factor (mg/L)	VOC Emission Factor (lb/Mgal)	VOC Emissions (tpy)
Gasoline <sup>b,c,d</sup>	256,230	35	0.29	37.42
Diesel <sup>b</sup>	256,230		4.26E-04	0.05
Jet Kerosene <sup>b</sup>	473,040		5.57E-04	0.13
<b>Total Stack Emissions:</b>				<b>37.60</b>
Fugitive Vapor Leakage from Gasoline <sup>e</sup>	256,230		0.08	9.90
Fugitive Vapor Leakage from Diesel <sup>e</sup>	256,230		1.12E-04	1.44E-02
Fugitive Vapor Leakage from Jet Kerosene <sup>e</sup>	473,040		1.47E-04	3.47E-02
Fugitive Vapor Leakage from Transmix <sup>b,e</sup>	2,100		2.02	2.12
<b>Total Fugitive Emissions:</b>				<b>12.07</b>

<sup>a</sup> The potential emissions from loading rack and VCU are based on the annual throughput limits established in PTC No. P-2014-0009.

Gasoline pumping maximum:	256,230	Mgal/yr
Diesel pumping maximum:	256,230	Mgal/yr
Jet pumping maximum:	473,040	Mgal/yr

Other notes are shown in the following table.

<sup>b</sup> Loading emission factors for diesel fuel, jet kerosene, and transmix are calculated using Equation 1 in AP-42, Section 5.2, Transportation and Marketing of Petroleum Liquids, dated July 2008. Equation 1 is  $L = 12.46 * P * M / T * (1 - \text{eff} / 100)$ . As discussed below, the VOC vapor emission factor L is multiplied by the rate at which vapors are captured, an estimated 98.7% based on the AP-42 recommended value (footnote f).

S =	0.60	Saturation factor for tank trucks, submerged loading, normal service. AP-42 Table 5.2-1, 6/08.
P <sub>Distillate # 2</sub> =	0.0045	(psia) True vapor pressure calculated based on data for Distillate Fuel Oil No. 2 provided in AP-42, Section 7, Table 7.1-2, dated November 2006 (see Table C-3d).
M <sub>Distillate # 2</sub> =	130	(lb/lbmol) Molecular weight of Distillate Fuel Oil No. 2 vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
P <sub>Gasoline</sub> =	6.77	(psia) True vapor pressure calculated based on data for Gasoline RVP 15 (see Table C-3d).
M <sub>Gasoline</sub> =	60	(lb/lbmol) Molecular weight of Gasoline RVP 15 vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
P <sub>Jet A</sub> =	0.006	(psia) True vapor pressure calculated based on data for Jet Kerosene provided in AP-42, Section 7, Table 7.1-2, dated November 2006 (see Table C-3d).
M <sub>Jet A</sub> =	130	(lb/lb-mol) Molecular weight of Jet Kerosene vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
P <sub>Transmix</sub> =	2.29	(psia) See calculations in Tables C-3a through C-3d. True vapor pressure linearly interpolated based on data for Gasoline RVP 15, Distillate Fuel Oil No. 2, and Jet Kerosene--see Tables C-3a through C-3d.
M <sub>Transmix</sub> =	60	(lb/lbmol) Molecular weight calculated in Tables C-3a through C-3d based on Gasoline RVP 15, Distillate Fuel Oil No. 2, and Jet Kerosene vapors at 60 F--see Tables C-3a through C-3d.
T =	511	(R) Daily Average Ambient Temperature for Boise, ID, per TANKS 4.0.9d
eff =	95%	Assumed average control efficiency for VCU per AP-42, Section 5.2, page 5.2-6 (range provided between 90-99%). Efficiency is used for diesel fuel, jet fuel, and transmix.

This equation is also used to calculate uncontrolled loading emission factor for gasoline loading, for the purpose of calculating fugitive losses from gasoline loading, as shown in footnote 'f'.

<sup>c</sup> Permit T1-050032, Condition 3.2, stipulates that TOC emissions from the VCU shall not exceed 35 milligrams per liter of liquid throughput into gasoline tank trucks, per 40 CFR 60.502(b). Diesel fuel and jet kerosene do not meet the definition of gasoline, so the AP-42 loading equation in footnote 'b' is used for these liquids.

<sup>d</sup> Denatured ethanol and fuel additives are added to gasoline prior to loading into the tanker trucks. The quantity loaded includes denatured ethanol, additive, and gasoline. The gasoline mixture (gasoline blended with ethanol and/or additive) meets the definition of gasoline provided in 40 CFR 60.501.

<sup>e</sup> Per AP-42, Chapter 5, section 5.2.2.1.1 page 5.2-6, not all of the displaced vapors reach the control device because of leakage from both the tank truck and collection system. In order to capture these fugitive emissions, the uncontrolled emission factors provided in AP-42, Table 5.2-5 for loading operations are used in conjunction with a 98.7% collection efficiency for tank trucks that meet the NSPS-level annual leak test. Therefore, the emission factor associated to the leakage (EF<sub>Leak</sub>) can be calculated as follows:  $EF_{Leak} = (1 - \text{Collection eff} / 100) * EF_{Uncontrolled}$

EF <sub>Uncontrolled</sub> =	5.95	(lb/Mgal) Uncontrolled Organic Emission Factor for Gasoline, submerged loading
EF <sub>Uncontrolled</sub> =	0.009	(lb/Mgal) Uncontrolled Organic Emission Factor for Distillate Oil No.2 for Tank-Trucks
EF <sub>Uncontrolled</sub> =	0.011	(lb/Mgal) Uncontrolled Organic Emission Factor for Jet Kerosene for Tank-Trucks
EF <sub>Uncontrolled</sub> =	2.02	(lb/Mgal) Uncontrolled Organic Emission Factor for Transmix
Control Eff.	98.7%	

**Table C-11b. Truck Loading Rack and VCU - Criteria Pollutant Emissions Using MMBtu/hr Threshold**

Variable	Value	Units of Measure
Flow of VOC Vapors from Rack <sup>a</sup>	9,985,689	scf/yr at 50.92 °F
Molar Gas Constant	0.73	atm ft <sup>3</sup> / lbmol °R
Molar Flow of Hydrocarbon to VCU <sup>b</sup>	3,375.56	mol/s hydrocarbons as C <sub>4</sub> H <sub>10</sub>
HHV as Butane <sup>c</sup>	2,877.60	kJ/mol HHV
Maximum Heat Input Rate to VCU	33,143.90	MMBtu/yr HHV
<b>Emission Factors<sup>d</sup></b>		
	<b>(lb/MMBtu)</b>	<b>Emissions (tpy)</b>
PM	7.65E-03	0.13
PM <sub>10</sub>	7.65E-03	0.13
PM <sub>2.5</sub>	7.65E-03	0.13
SO <sub>2</sub> <sup>e</sup>	7.49E-04	0.01
NO <sub>x</sub>	1.47E-01	2.44
CO	8.24E-02	1.36

<sup>a</sup> Based on design vapor capacity of the VCU.

<sup>b</sup> Calculated as: (vapor flow, acf/min)\*(vol% HC as propane, vol%)/(0.7302 atm ft<sup>3</sup> / lbmol °R)\*(1 atm)/(0 °F + 459.67 F°)\*(453.5924 g/lb)/(60 s/min)

<sup>c</sup> Per CRC Handbook of Chemistry and Physics, p. 5-70.

<sup>d</sup> Emission factors from AP-42, Section 1.5, external combustion of butane vapors, Tables 1.5-1, converted to lb/MMBtu using the 102 x 10<sup>6</sup> BTU/10<sup>3</sup> gal basis on which the AP-42 factors are based.

<sup>e</sup> The emission factor in AP-42, Section 1.5 for SO<sub>2</sub> is (0.09)\*(S) lb/10<sup>3</sup> gal fuel combusted, where S is the sulfur content of the fuel in gr/100 lb. A sulfur content of 0.59 gr / 100 scf is calculated, based on a very conservative assumption that 100% of sulfur in gasoline is vaporized.

Gasoline sulfur content:	80	ppmw based on federal EPA Tier 2 cap for gasoline sulfur
Density of gasoline:	5.6	lb/gal
Vapors generating during loading:	5.95E-03	lb vapors / gal loaded
Gasoline vapor molar mass	60.00	lb / lbmol
Temperature	510.59	°R
Gasoline Vapor Mass	0.16	lb vapor / scf vapor
Gasoline Vapor Concentration of Sulfur	1.21E-02	lb S / scf vapor
Gasoline Vapor Concentration of Sulfur	0.85	gr S / 100 scf vapor

**Table C-12a. Space Heater Combustion Duty**

Quantity	Furnaces and Heaters <sup>a</sup>
Furnace 1 Heat Input, Btu/hr	150,000
Furnace 2 Heat Input, Btu/hr	50,000
Furnace 3 Heat Input, Btu/hr	105,000
Furnace 4 Heat Input, Btu/hr	45,000
Furnace 5 Heat Input, Btu/hr	113,000
Furnace 6 Heat Input, Btu/hr	180,000
Maximum Heat Input, Btu/hr	643,000
Operating Hours, hr/yr	8,760
Natural Gas Higher Heating Value, BTU/scf	1,020
Maximum Fuel Consumption, MMscf/yr	5.52

<sup>a</sup> Space heaters and furnaces, rated as shown, 6 units total.

**Table C-12b. Loading Vapor Production (Annual)**

	Captured VOC <sup>a</sup> (tpy)	Vapor Molar Mass (lb/lbmol)	Fuel Consumption <sup>b</sup> (MMscf/yr)
<b>VCU Stack</b>			
Gasoline	761.73	60	9.46
Diesel	1.11	130	0.01
Jet Kerosene	2.67	130	0.02
VCU Pilot			0.50
Total			9.99
<b>Other Combustion Sources</b>			
Space Heaters, Furnaces			5.52
<b>TOTAL</b>			<b>15.51</b>

<sup>a</sup> Combusted VOC is conservatively assumed to be 100% of VOC captured at the loading rack. Captured VOC is the product of the uncontrolled emission factor and maximum throughput of each product, as shown below:

	EF, lb/Mgal	TP, Mgal/yr
Gasoline	5.95	256,230
Diesel	0.009	256,230
Jet Kerosene	0.011	473,040

<sup>b</sup> Vapors combusted in MMscf/yr calculated as:

$$(\text{tpy VOC}) * (2,000 \text{ lb/ton}) * (\text{vapor MW, in lb VOC/lbmol VOC}) * R \text{ (scf atm/lbmol } ^\circ\text{R)}$$

\* Annual average temperature ( $^\circ\text{R}$ ) / 1 atm

$$R \text{ (Ideal Gas Constant)} \quad 0.73 \quad \text{scf atm/lbmol } ^\circ\text{R}$$

$$\text{Temperature} \quad 511 \quad ^\circ\text{R}$$

VCU pilot is based on scf natural gas listed in technical specifications for the unit of:

0.50 MMscf/yr

Space heaters and small sources' consumption calculated in Table C-12a above.

**Table C-13. Natural Gas Combustion PTE - VOC and HAPs**

Pollutant	CAS No.	Emission Factor <sup>a</sup> (lb/MMscf)	VCU Emissions <sup>b,c</sup> (tpy)	Furnace and Heater Emissions <sup>c</sup> (tpy)	Totals (tpy)
NO <sub>x</sub>		1.70E+02	--	4.69E-01	--
CO		2.40E+01	--	6.63E-02	--
PM		7.60E+00	3.79E-02	2.10E-02	5.89E-02
PM <sub>10</sub>		7.60E+00	3.79E-02	2.10E-02	5.89E-02
PM <sub>2.5</sub>		7.60E+00	3.79E-02	2.10E-02	5.89E-02
SO <sub>2</sub>		6.00E-01	3.00E-03	1.66E-03	4.65E-03
VOC		5.50E+00	--	1.52E-02	--
Lead		5.00E-04	2.50E-06	1.38E-06	3.88E-06
2-Methylnaphthalene	91-57-6	2.40E-05	1.20E-07	6.63E-08	1.86E-07
3-Methylchloranthrene	56-49-5	1.80E-06	8.99E-09	4.97E-09	1.40E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	7.99E-08	4.42E-08	1.24E-07
Acenaphthene	83-32-9	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Acenaphthylene	203-96-8	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Anthracene	120-12-7	2.40E-06	1.20E-08	6.63E-09	1.86E-08
Benz(a)anthracene	56-55-3	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Benzene	71-43-2	2.10E-03	1.05E-05	5.80E-06	1.63E-05
Benzo(a)pyrene	50-32-8	1.20E-06	5.99E-09	3.31E-09	9.30E-09
Benzo(b)fluoranthene	205-99-2	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Benzo(g,h,i)perylene	191-24-2	1.20E-06	5.99E-09	3.31E-09	9.30E-09
Benzo(k)fluoranthene	205-82-3	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Chrysene	218-01-9	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	5.99E-09	3.31E-09	9.30E-09
Dichlorobenzene	25321-22-6	1.20E-03	5.99E-06	3.31E-06	9.30E-06
Fluoranthene	206-44-0	3.00E-06	1.50E-08	8.28E-09	2.33E-08
Fluorene	86-73-7	2.80E-06	1.40E-08	7.73E-09	2.17E-08
Formaldehyde	50-00-0	7.50E-02	3.74E-04	2.07E-04	5.82E-04
Hexane	110-54-3	1.80E+00	8.99E-03	4.97E-03	1.40E-02
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	8.99E-09	4.97E-09	1.40E-08
Naphthalene	91-20-3	6.10E-04	3.05E-06	1.68E-06	4.73E-06
Phenanthrene	85-01-8	1.70E-05	8.49E-08	4.69E-08	1.32E-07
Pyrene	129-00-0	5.00E-06	2.50E-08	1.38E-08	3.88E-08
Toluene	108-88-3	3.40E-03	1.70E-05	9.39E-06	2.64E-05
Arsenic	7440-38-2	2.00E-04	9.99E-07	5.52E-07	1.55E-06
Beryllium	7440-41-7	1.20E-05	5.99E-08	3.31E-08	9.30E-08
Cadmium	7440-43-9	1.10E-03	5.49E-06	3.04E-06	8.53E-06
Chromium	7440-47-3	1.40E-03	6.99E-06	3.87E-06	1.09E-05
Cobalt	7440-48-4	8.40E-05	4.19E-07	2.32E-07	6.51E-07
Manganese	7439-96-5	3.80E-04	1.90E-06	1.05E-06	2.95E-06
Mercury	7439-97-6	2.60E-04	1.30E-06	7.18E-07	2.02E-06
Nickel	7440-02-0	2.10E-03	1.05E-05	5.80E-06	1.63E-05
Selenium	7782-49-2	2.40E-05	1.20E-07	6.63E-08	1.86E-07
<b>TOTAL HAP</b>		<b>1.89E+00</b>	<b>9.43E-03</b>	<b>5.21E-03</b>	<b>1.46E-02</b>

<sup>a</sup> Emission factors from AP-42, Section 1.4, Combustion of Natural Gas (7/98).

<sup>b</sup> Emissions of NO<sub>x</sub>, CO, and VOC are calculated for the VCU based on the parameters set forth in Table C-11a.

<sup>c</sup> Emission calculation is as follows: Emissions, tpy = (Fuel consumption, MMscf/yr) (Emission factor, lb/MMscf) / (2,000 lb/ton)

VCU, MMscf/yr combustion rate: 9.99 MMscf/yr (includes captured loading vapors)  
 NG combustion sources, MMscf/yr combustion rate: 5.52 MMscf/yr

**Table C-14a. Loading Rack/VCU and Fugitives PTE - HAPs**

	VOC <sup>a</sup> (tpy)	2,2,4-Trimethyl pentane (Isooctane) 540-84-1 (tpy)	Benzene 71-43-2 (tpy)	Biphenyl 92-52-4 (tpy)	Cresol 1319-77-3 (tpy)	Ethyl benzene 100-41-4 (tpy)	Hexane (-n) 110-54-3 (tpy)	Isopropyl Benzene (Cumene) 98-82-8 (tpy)	Methanol 67-56-1 (tpy)	Naphthalene 91-20-3 (tpy)	Phenol 108-95-2 (tpy)	Styrene 100-42-5 (tpy)	Toluene 108-88-3 (tpy)	Xylenes 1330-20-7 (tpy)	Total HAP (tpy)
<b>Product Loading Rack/VCU Stack<sup>b,c</sup></b>															
Gasoline	37.42	7.52E-02	9.79E-02	9.89E-03	6.00E-03	6.09E-03	1.69E-01	4.26E-04	1.29E-02	4.13E-05	7.99E-03	3.39E-04	1.09E-01	3.86E-02	0.51
Diesel (Max)	0.05	9.43E-04	6.65E-03	4.34E-06	7.39E-06	3.92E-04	4.15E-03	1.40E-04	1.00E-03	4.76E-05	7.73E-05	6.00E-05	2.13E-03	1.97E-03	9.86E-03
Jet Fuel (Max)	0.13	6.09E-03	6.09E-03	2.04E-05	7.53E-06	3.65E-03	1.03E-02	6.22E-04	1.00E-03	1.40E-04	1.51E-05	6.00E-05	1.59E-02	1.70E-02	4.77E-02
<b>TOTAL</b>	<b>37.60</b>	<b>0.08</b>	<b>0.10</b>	<b>2.48E-05</b>	<b>1.49E-05</b>	<b>1.01E-02</b>	<b>0.18</b>	<b>1.19E-03</b>	<b>1.29E-02</b>	<b>2.29E-04</b>	<b>9.25E-05</b>	<b>3.39E-04</b>	<b>0.13</b>	<b>0.06</b>	<b>0.57</b>
<b>Product Loading Rack Fugitives</b>															
Gasoline	9.90	1.99E-02	2.59E-02	9.89E-03	6.79E-03	1.61E-03	4.47E-02	1.13E-04	3.42E-03	1.09E-05	6.00E-03	8.97E-05	2.88E-02	1.02E-02	0.13
Diesel	1.44E-02	2.48E-04	1.01E-03	1.14E-06	1.95E-06	1.03E-04	1.09E-03	3.69E-05	1.00E-03	1.25E-05	2.04E-05	6.00E-05	5.61E-04	5.18E-04	2.60E-03
Jet Fuel	3.47E-02	6.09E-03	6.09E-03	5.38E-06	1.98E-06	9.62E-04	2.72E-03	1.64E-04	1.00E-03	3.69E-05	3.99E-06	6.00E-05	4.19E-03	4.49E-03	1.26E-02
<b>TOTAL</b>	<b>9.95</b>	<b>0.02</b>	<b>0.03</b>	<b>6.53E-06</b>	<b>3.93E-06</b>	<b>2.68E-03</b>	<b>0.05</b>	<b>3.14E-04</b>	<b>3.42E-03</b>	<b>6.04E-05</b>	<b>2.44E-05</b>	<b>8.97E-05</b>	<b>0.03</b>	<b>0.02</b>	<b>0.15</b>
<b>Transmix Loading Operation Fugitives</b>															
Transmix <sup>d</sup>	2.12	4.30E-03	5.52E-03	7.69E-07	6.69E-07	4.55E-04	1.00E-02	4.80E-05	7.28E-04	8.79E-06	5.51E-06	1.91E-05	6.65E-03	2.71E-03	0.03

<sup>a</sup> The annual emissions from loading rack and VCU are based on the annual throughputs of loading rack and VCU.

<sup>b</sup> Vapor weight fractions of speciated HAP at the VCU stack are assumed to be equivalent to the vapor weight fractions of HAP for each product.

<sup>c</sup> VCU combusts VOC vapors captured at the loading rack, as well as natural gas. Speciated HAP from natural gas combustion is computed in Table C-13. This table represents HAP from captured loading vapors that are not completely combusted at the VCU.

<sup>d</sup> Transmix speciation calculated in Tables C-3a through C-3d and Tables C-7c through C-7e; the final speciation is represented in Table A-11e.

**Table C-14b. Speciations by Stock**

Stock	2,2,4-Trimethyl pentane (Isooctane) 540-84-1	Benzene 71-43-2	Biphenyl 92-52-4	Cresol 1319-77-3	Ethyl benzene 100-41-4	Hexane (-n) 110-54-3	Isopropyl Benzene (Cumene) 98-82-8	Methanol 67-56-1	Naphthalene 91-20-3	Phenol 108-95-2	Styrene 100-42-5	Toluene 108-88-3	Xylenes 1330-20-7	Total
<b>Liquid Weight Fractions</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	
Conventional Gasoline (all grades)	1.97E-02	1.29E-02	ND	ND	9.26E-03	1.34E-02	1.50E-03	1.43E-03	3.03E-03	ND	7.80E-04	5.25E-02	4.91E-02	0.164
Diesel No. 2, No. 1, Heating Fuel	1.20E-04	ND	7.10E-04	5.00E-04	2.90E-04	1.60E-04	2.40E-04	ND	1.70E-03	2.60E-03	ND	5.00E-04	1.22E-03	0.008
Jet Fuel, Commercial Jet Fuel, JP-8	ND	ND	2.10E-03	3.20E-04	1.70E-03	2.50E-04	6.70E-04	ND	3.15E-03	3.20E-04	ND	2.35E-03	6.64E-03	0.018
Transmix	4.17E-03	2.70E-03	9.56E-04	3.44E-04	2.57E-03	2.95E-03	6.25E-04	2.99E-04	2.39E-03	1.41E-03	1.63E-04	1.19E-02	1.28E-02	0.043
Most Conservative Diesel/Jet	1.20E-04	ND	2.10E-03	5.00E-04	1.70E-03	2.50E-04	6.70E-04	ND	3.15E-03	2.60E-03	ND	2.35E-03	6.64E-03	0.020
<b>Vapor Weight Fractions</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	
Conventional Gasoline (all grades)	2.01E-03	2.62E-03	ND	ND	1.63E-04	4.52E-03	1.14E-05	3.45E-04	1.10E-06	1.42E-03	9.06E-06	2.91E-03	1.03E-03	0.014
Diesel No. 2, No. 1, Heating Fuel	1.73E-02	ND	7.96E-05	1.36E-04	7.18E-03	7.60E-02	2.57E-03	ND	8.72E-04	1.42E-03	ND	3.90E-02	3.61E-02	0.181
Jet Fuel, Commercial Jet Fuel, JP-8	2.03E-03	2.61E-03	1.55E-04	5.71E-05	2.77E-02	7.83E-02	4.72E-03	1.06E-03	1.06E-03	1.15E-04	1.21E-01	1.29E-01	1.29E-01	0.362
Transmix	2.03E-03	2.61E-03	3.63E-07	3.16E-07	2.15E-04	4.75E-03	2.27E-05	3.44E-04	4.15E-06	2.60E-06	9.03E-06	3.14E-03	1.28E-03	0.014
Most Conservative Diesel/Jet	1.73E-02	ND	1.55E-04	1.36E-04	2.77E-02	7.83E-02	4.72E-03	ND	1.06E-03	1.42E-03	ND	1.21E-01	1.29E-01	0.381

Values reported in weight fractions. Vapor weight fractions are calculated in Table A-11c. Liquid weight fractions reproduced for reference from Table A-11a.

**Table C-15a. Temperature Correction for Short-Term Loading Emission Factors**

Quantity	UOM	Product Loading Rack			Transmix Loading Operation
		Gasoline Loading	Diesel Loading	Jet Loading	
VOC Uncontrolled Annual Emission Factor <sup>a</sup>	lb/gal	5.95E-03	8.63E-06	1.13E-05	2.02E-03
Annual Average Temperature	°R	511	511	511	511
Maximum Daily Average Temperature	°R	534	534	534	534
Annual Average Vapor Pressure	psia	6.8	0.0045	0.006	2.291
Maximum Daily Average Vapor Pressure	psia	10.2	0.0095	0.012	3.438
VOC Uncontrolled Short-Term Emission Factor <sup>a</sup>	lb/gal	8.53E-03	1.73E-05	2.25E-05	2.89E-03
VOC VCU Stack Short-Term Emission Factor <sup>b</sup>	lb/gal	2.92E-04	8.55E-07	1.11E-06	--
VOC Fugitive Short-Term Emission Factor <sup>b</sup>	lb/gal	1.11E-04	2.25E-07	2.93E-07	2.89E-03

<sup>a</sup> Loading emission factors for VOC are calculated in Table A-15a and A-15b using Equation 1 of AP-42 Section 5.2.

Equation 1 is  $L = 12.46 \cdot S \cdot P \cdot M / T \cdot (1 - \text{eff} / 100)$

Of these terms, the vapor pressure P and the average loading temperature T vary depending on whether T is evaluated for an annual average or for a short-term daily average.

Therefore, to correct the emission factor L for use as a short-term emission factor, the annual factor is divided by the ratio (P / T) using the annual values in Table A-15b, and multiplied by the same ratio (P / T) for short-term values using the vapor pressures below interpolated from AP-42 Table 7.1-2:

$P_{\text{Gasoline RVP15}} = 10.15$   
 $P_{\text{Diesel @ 2}} = 0.0095$   
 $P_{\text{Jet A}} = 0.012$   
 $P_{\text{Transmix}} = 3.438$

<sup>b</sup> Capture efficiency and control efficiencies are given in Table C-11a and are applied here as well.

Loading rack fugitive emissions = (Loading emissions) \* (1 - capture eff.)

VCU stack emissions = (Loading emissions) \* (capture eff.) \* (1 - control eff.)

Exceptions to the above: the VCU stack emissions are limited in mg/L for gasoline loading, and vapors from the transmix loading operation are not captured.

Capture eff. = 98.7%  
 Control eff. = 95%  
 Emission limit = 35 mg/L

**Table C-15b. Short-Term Emissions of Criteria Pollutants from the VCU**

Product	Quantity Loaded <sup>a</sup>	VOC Emission Factor <sup>b,c</sup>		VOC Emissions <sup>d</sup>	Percent Hourly Uptime <sup>a</sup>	Hourly Throughput <sup>a</sup>
	(gpm)	(mg/L)	(lb/gal)	(lb/hr)	(%, hr/hr)	(gal/hr)
Gasoline	5,200	35	2.92E-04	91.2	75%	234,000
Diesel	1,300		8.55E-07	0.1	75%	58,500
Jet	1,200		1.11E-06	0.1	75%	54,000
Total	7,700			91.30		

<sup>a</sup> The short-term emissions from loading rack and VCU are based on the maximum loading rates of the loading rack.

75% For NO<sub>x</sub> and CO calculations on an hourly basis, this percent uptime of pumps is applied to allow for truck ingress/egress from the loading bays.

<sup>b</sup> Permit T1-050032, Condition 3.2, stipulates that TOC emissions from the VCU shall not exceed 35 milligrams per liter of liquid throughput into gasoline tank trucks, per 40 CFR 60.502(b). Diesel fuel, jet kerosene, and transmix do not meet the definition of gasoline, so the AP-42 loading equation in footnote 'b' of Table C-11a is used for these liquids.

<sup>c</sup> Loading emission factors for diesel fuel and jet kerosene are calculated using Equation 1 in AP-42, Section 5.2, Transportation and Marketing of Petroleum Liquids, dated July 2008.

S =	0.6	Saturation factor for tank trucks, submerged loading, normal service. AP-42 Table 5.2-1, 6/08.
P <sub>Distillate # 2</sub> =	0.0045	(psia) True vapor pressure calculated based on data for Distillate Fuel Oil No. 2 provided in AP-42, Section 7, Table 7.1-2, dated November 2006 (see Table C-3d).
M <sub>Distillate # 2</sub> =	130	(lb/lbmol) Molecular weight of Distillate Fuel Oil No. 2 vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
P <sub>Gasoline RVP15</sub> =	6.77	(psia) True vapor pressure calculated based on data for Gasoline RVP 15 (see Table C-3d).
M <sub>Gasoline RVP15</sub> =	60	(lb/lbmol) Molecular weight of Gasoline RVP 15 vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
P <sub>Jet A</sub> =	0.006	(psia) True vapor pressure calculated based on data for Jet Kerosene provided in AP-42, Section 7, Table 7.1-2, dated November 2006 (see Table C-3d).
M <sub>Jet A</sub> =	130	(lb/lb-mol) Molecular weight of Jet Kerosene vapor at 60 F (AP-42, Section 7, Table 7.1-2, dated November 2006)
T =	511	(R) Daily Average Ambient Temperature for Boise, ID, per TANKS 4.0.9d
eff =	0.95	Assumed average control efficiency for VCU per AP-42, Section 5.2, page 5.2-6 (range provided between 90-99%). Efficiency is used for diesel fuel, jet fuel, and transmix.

<sup>d</sup> Emissions of VOC from the loading rack are calculated as: (loading rate, gpm) \* (emission factor, lb/Mgal) (Mgal / 1,000 gal) (60 min/hr)

**Table C-15c. Calculated Short-Term Fuel Combustion at the VCU in scf**

	Captured VOC <sup>a</sup> (lb/hr)	Vapor	Vapor Combustion <sup>c</sup> (MMscf/hr)
		Molar Mass <sup>b</sup> (lb/lbmol)	
Gasoline	2662.13	60	1.71E-02
Diesel	1.35	130	4.01E-06
Jet	1.62	130	4.80E-06
VCU Pilot			5.71E-05
<b>TOTAL</b>	<b>2665.10</b>		<b>1.72E-02</b>

<sup>a</sup> Per AP-42, Chapter 5, section 5.2.2.1.1 page 5.2-6, not all of the displaced vapors reach the control device because of leakage from both the tank truck and collection system. The following "uncontrolled" loading emission factors are calculated from AP-42 Equation 1 used above. These factors are used to determine the rate of VOC capture in lb/hr.

EF <sub>Uncontrolled</sub> =	8.53E-03	(lb/gal) Uncontrolled Organic Emission Factor for Gasoline, submerged loading
EF <sub>Uncontrolled</sub> =	1.73E-05	(lb/gal) Uncontrolled Organic Emission Factor for Distillate Oil No.2 for Tank-Trucks
EF <sub>Uncontrolled</sub> =	2.25E-05	(lb/gal) Uncontrolled Organic Emission Factor for Jet Kerosene for Tank-Trucks
Standard Temperature	527.67	*R = 68 °F

<sup>b</sup> Vapor molar masses provided in AP-42 Table 7.1-2.

<sup>c</sup> Fuel combustion rate in MMscf/hr is calculated so that specified combustion emissions may be estimated using AP-42 factors. The VCU pilot has a maximum combustion rate of 0.5 MMscf/yr, which is a constant flow rate converted to MMscf/hr by dividing by 8,760. Loading vapor flow rates (lb/hr) are converted to MMscf/hr using the equation:  
 Flow rate, MMscf/hr = flow rate, lb/hr \* (molar mass, lb/lbmol of vapors)<sup>-1</sup> \* 0.73 (scf atm / lbmol-°R) / 1 atm \* 511 °R / 10<sup>6</sup>

**Table C-15d. Truck Loading Rack and VCU - VOC, CO, and NOX Short-Term Emissions Using MMBtu/hr Threshold**

Variable	Value	Units of Measure
Flow of VOC Vapors from Rack <sup>a</sup>	17,157	scf/hr at 50.92 °F
Molar Gas Constant	0.73	atm ft <sup>3</sup> / lbmol °R
Molar Flow of Hydrocarbon to VCU <sup>b</sup>	5.80	mol/s hydrocarbons as C <sub>4</sub> H <sub>10</sub>
HHV as Butane <sup>c</sup>	2,877.6	kJ/mol HHV
Maximum Heat Input Rate to VCU	56.95	MMBtu/hr HHV
<b>Emission Factors<sup>d</sup></b>		
<b>(lb/MMBtu)</b>	<b>Emissions</b>	<b>(lb/hr)</b>
PM	7.65E-03	0.44
PM <sub>10</sub>	7.65E-03	0.44
PM <sub>2.5</sub>	7.65E-03	0.44
SO <sub>2</sub> <sup>e</sup>	5.05E-04	0.03
NO <sub>x</sub>	1.47E-01	8.37
CO	8.24E-02	4.69

<sup>a</sup> Based on design vapor capacity of the VCU.

<sup>b</sup> Calculated as: (vapor flow, scf/min)\*(vol% HC as propane, vol%)/(0.7302 atm ft<sup>3</sup> / lbmol °R)\*(1 atm)/(0 °F + 459.67 F°)\*(453.5924 g/lb)/(60 s/min)

<sup>c</sup> Per CRC Handbook of Chemistry and Physics, p. 5-70.

<sup>d</sup> Emission factors from AP-42, Section 1.5, external combustion of butane vapors, Tables 1.5-1, converted to lb/MMBtu using the 102 x 10<sup>6</sup> BTU/10<sup>3</sup> gal basis on which the AP-42 factors are based.

<sup>e</sup> The emission factor in AP-42, Section 1.5 for SO<sub>2</sub> is (0.09)\*(S) lb/10<sup>3</sup> gal fuel combusted, where S is the sulfur content of the fuel in gr/100 ft<sup>3</sup>. A sulfur content of 0.59 gr / 100 scf is calculated, based on a very conservative assumption that 100% of sulfur in gasoline is vaporized.

Gasoline sulfur content:	80	ppmw based on federal EPA Tier 2 cap for gasoline sulfur
Density of gasoline:	5.6	lb/gal
Vapors generating during loading:	8.53E-03	lb vapors / gal loaded
Gasoline vapor molar mass	60.00	lb / lbmol
Temperature	527.67	°R
Gasoline Vapor Mass	0.16	lb vapor / scf vapor
Gasoline Vapor Concentration of Sulfur	8.18E-03	lb S / scf vapor
Gasoline Vapor Concentration of Sulfur	0.57	gr S / 100 scf vapor

**Table C-16. Speciated Short-Term Combustion Emissions**

	CAS No.	Emission Factor <sup>a</sup> (lb/MMscf)	VCU Emissions <sup>b</sup> (lb/hr)	Other Combustion Emissions <sup>c</sup> (lb/hr)
PM <sub>10</sub>	--	7.60E+00	--	4.79E-03
PM <sub>2.5</sub>	--	7.60E+00	--	4.79E-03
SO <sub>2</sub>	--	6.00E-01	--	3.78E-04
	CAS No.	Emission Factor <sup>a</sup> (lb/MMscf)	VCU Emissions <sup>b</sup> (lb/hr)	Other Combustion Emissions <sup>c</sup> (lb/hr)
2-Methylnaphthalene	91-57-6	2.40E-05	4.12E-07	1.51E-08
3-Methylchloranthrene	56-49-5	1.80E-06	3.09E-08	1.13E-09
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	2.75E-07	1.01E-08
Acenaphthene	83-32-9	1.80E-06	3.09E-08	1.13E-09
Acenaphthylene	203-96-8	1.80E-06	3.09E-08	1.13E-09
Anthracene	120-12-7	2.40E-06	4.12E-08	1.51E-09
Benz(a)anthracene	56-55-3	1.80E-06	3.09E-08	1.13E-09
Benzene	71-43-2	2.10E-03	3.60E-05	1.32E-06
Benzo(a)pyrene	50-32-8	1.20E-06	2.06E-08	7.56E-10
Benzo(b)fluoranthene	205-99-2	1.80E-06	3.09E-08	1.13E-09
Benzo(g,h,i)perylene	191-24-2	1.20E-06	2.06E-08	7.56E-10
Benzo(k)fluoranthene	205-82-3	1.80E-06	3.09E-08	1.13E-09
Chrysene	218-01-9	1.80E-06	3.09E-08	1.13E-09
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	2.06E-08	7.56E-10
Dichlorobenzene	25321-22-6	1.20E-03	2.06E-05	7.56E-07
Fluoranthene	206-44-0	3.00E-06	5.15E-08	1.89E-09
Fluorene	86-73-7	2.80E-06	4.80E-08	1.77E-09
Formaldehyde	50-00-0	7.50E-02	1.29E-03	4.73E-05
Hexane	110-54-3	1.80E+00	3.09E-02	1.13E-03
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	3.09E-08	1.13E-09
Naphthalene	91-20-3	6.10E-04	1.05E-05	3.85E-07
Nitrous Oxide	10024-97-2	3.06E-01	5.25E-03	1.93E-04
Phenanthrene	85-01-8	1.70E-05	2.92E-07	1.07E-08
Pyrene	129-00-0	5.00E-06	8.58E-08	3.15E-09
Toluene	108-88-3	3.40E-03	5.83E-05	2.14E-06
Arsenic	7440-38-2	2.00E-04	3.43E-06	1.26E-07
Beryllium	7440-41-7	1.20E-05	2.06E-07	7.56E-09
Cadmium	7440-43-9	1.10E-03	1.89E-05	6.93E-07
Chromium	7440-47-3	1.40E-03	2.40E-05	8.83E-07
Cobalt	7440-48-4	8.40E-05	1.44E-06	5.30E-08
Manganese	7439-96-5	3.80E-04	6.52E-06	2.40E-07
Mercury	7439-97-6	2.60E-04	4.46E-06	1.64E-07
Nickel	7440-02-0	2.10E-03	3.60E-05	1.32E-06
Selenium	7782-49-2	2.40E-05	4.12E-07	1.51E-08

<sup>a</sup> Emission factor for nitrous oxide from 40 CFR 98 Subpart C, Table C-2. Converted to lb/MMscf from kg/MMBtu using the HHV of 1,388 Btu/scf for fuel gas. Other emission factors from AP-42, Section 1.4, Combustion of Natural Gas (7/98).

<sup>b</sup> VCU MMscfh combustion rate: 1.72E-02 as calculated in Table C-15c.

<sup>c</sup> Small heater MMscfh combustion rate: 6.30E-04 as shown in Table C-12a.

**Table C-17a. VCU Stack, Speciated Emissions from Uncombusted Vapor**

Pollutant		Gasoline Loading Emission Factor (lb/gal)	Diesel Loading Emission Factor (lb/gal)	Jet Loading Emission Factor (lb/gal)	
VOC		2.92E-04	8.55E-07	1.11E-06	
Pollutant	CAS No.	Gasoline Loading Emission Factor (lb/gal)	Diesel Loading Emission Factor (lb/gal)	Jet Loading Emission Factor (lb/gal)	Emissions (lb/hr)
1,2,4-Trimethyl benzene	95-63-6	3.28E-08	1.03E-08	2.33E-08	1.27E-02
2,2,4-Trimethylpentane (Isooctane)	540-84-1	7.62E-07	1.37E-08		2.39E-01
Benzene	71-43-2	9.68E-07			3.02E-01
Biphenyl	92-52-4		8.88E-11	2.26E-10	2.32E-05
Cresol	1319-77-3		1.82E-10	1.00E-10	2.14E-05
Ethyl benzene	100-41-4	7.09E-08	6.54E-09	3.31E-08	2.50E-02
Hexane (-n)	110-54-3	1.61E-06	5.66E-08	7.62E-08	5.11E-01
Isopropyl Benzene (Cumene)	98-82-8	5.28E-09	2.49E-09	5.98E-09	2.27E-03
Methanol	67-56-1	1.39E-07			4.35E-02
Naphthalene	91-20-3	6.00E-10	9.92E-10	1.58E-09	3.79E-04
Phenol	108-95-2		1.98E-09	2.10E-10	1.70E-04
Styrene	100-42-5	3.97E-09			1.24E-03
Toluene	108-88-3	1.16E-06	3.27E-08	1.32E-07	3.75E-01
Xylenes	1330-20-7	3.15E-07	2.30E-08	1.08E-07	1.08E-01

<sup>a</sup> Loading emission factors for VOC are calculated in Table C-15a.

<sup>b</sup> Speciated emission factors are calculated as the product of the VOC emission factor and the vapor speciation presented in Table C-8e.

<sup>c</sup> Speciated emissions are the sum of the products of the loading rates presented in Table C-15b (shown below) with the emission factors shown in this table. Speciated emissions are summed across all products for a maximum worst-case hourly emission rate.

Gasoline	5,200	gpm
Diesel	1,300	gpm
Jet	1,200	gpm

**Table C-17b. Product Loading Rack Short-Term Speciated Fugitive Emissions**

Pollutant		Gasoline Loading Emission Factor (lb/gal)	Diesel Loading Emission Factor (lb/gal)	Jet Loading Emission Factor (lb/gal)	
VOC - Controlled		1.11E-04	2.25E-07	2.93E-07	
Pollutant	CAS No.	Gasoline Loading Emission Factor (lb/gal)	Diesel Loading Emission Factor (lb/gal)	Jet Loading Emission Factor (lb/gal)	Emissions (lb/hr)
1,2,4-Trimethyl benzene	95-63-6	1.25E-08	2.70E-09	6.15E-09	4.54E-03
2,2,4-Trimethylpentane (Isooctane)	540-84-1	2.89E-07	3.61E-09		9.06E-02
Benzene	71-43-2	3.68E-07			1.15E-01
Biphenyl	92-52-4		2.34E-11	5.96E-11	6.11E-06
Cresol	1319-77-3		4.79E-11	2.64E-11	5.63E-06
Ethyl benzene	100-41-4	2.69E-08	1.72E-09	8.71E-09	9.17E-03
Hexane (-n)	110-54-3	6.10E-07	1.49E-08	2.01E-08	1.93E-01
Isopropyl Benzene (Cumene)	98-82-8	2.00E-09	6.55E-10	1.58E-09	7.90E-04
Methanol	67-56-1	5.29E-08			1.65E-02
Naphthalene	91-20-3	2.28E-10	2.61E-10	4.17E-10	1.22E-04
Phenol	108-95-2		5.23E-10	5.54E-11	4.48E-05
Styrene	100-42-5	1.51E-09			4.70E-04
Toluene	108-88-3	4.42E-07	8.61E-09	3.49E-08	1.41E-01
Xylenes	1330-20-7	1.20E-07	6.07E-09	2.85E-08	3.98E-02

<sup>a</sup> Loading emission factors for VOC are calculated in Table C-15a.

<sup>b</sup> Speciated emission factors are calculated as the product of the VOC emission factor and the vapor speciation presented in Table C-8e.

<sup>c</sup> Speciated emissions are the sum of the products of the loading rates presented in Table C-15b (shown below) with the emission factors shown in this table. Speciated emissions are summed across all products for a maximum worst-case hourly emission rate.

Gasoline	5,200	gpm
Diesel	1,300	gpm
Jet	1,200	gpm

**Table C-18. Transmix Loading Operation Short-Term Speciated Fugitive Emissions**

<b>Pollutant</b>		<b>Transmix Loading Emission Factor (lb/gal)</b>	
VOC - Controlled		2.89E-03	
<b>Pollutant</b>	<b>CAS No.</b>	<b>Transmix Loading Emission Factor (lb/gal)</b>	<b>Transmix Loading Emissions (lb/hr)</b>
1,2,4-Trimethyl benzene	95-63-6	3.15E-07	0.01
2,2,4-Trimethylpentane (Isooctane)	540-84-1	5.89E-06	0.10
Benzene	71-43-2	7.55E-06	0.13
Biphenyl	92-52-4	1.05E-09	0.00
Cresol	1319-77-3	9.15E-10	0.00
Ethyl benzene	100-41-4	6.23E-07	0.01
Hexane (-n)	110-54-3	1.37E-05	0.23
Isopropyl Benzene (Cumene)	98-82-8	6.56E-08	0.00
Methanol	67-56-1	9.96E-07	0.02
Naphthalene	91-20-3	1.20E-08	0.00
Phenol	108-95-2	7.54E-09	0.00
Styrene	100-42-5	2.61E-08	0.00
Toluene	108-88-3	9.10E-06	0.15
Xylenes	1330-20-7	3.70E-06	0.06

<sup>a</sup> Loading emission factors for VOC are listed in Table C-15a.

<sup>b</sup> Speciated emission factors are calculated as the product of the VOC emission factor and the vapor speciation presented in Table C-8e.

<sup>c</sup> Speciated emissions are the sum of the products of the loading rates shown below with the emission factors shown in this table.

Transmix                      280                      gpm

**Table C-19. Facilitywide GHG Emissions, Calculated in CO<sub>2</sub> Equivalents (CO<sub>2</sub>e)**

	Fuel Consumption (MMscf/yr)	Heating Value <sup>d</sup> (Btu/scf)	Maximum Annual Heat Input (MMBtu/yr)	CO <sub>2</sub> Emission Factor <sup>e</sup> (kg/MMBtu)	CO <sub>2</sub> Emission Rate (kg/yr)	CH <sub>4</sub> Emission Factor <sup>e</sup> (kg/MMBtu)	CH <sub>4</sub> Emission Rate (kg/yr)	N <sub>2</sub> O Emission Factor <sup>e</sup> (kg/MMBtu)	N <sub>2</sub> O Emission Rate (kg/yr)	Total Emission Rate <sup>d</sup> (kg/yr CO <sub>2</sub> e)	(tpy CO <sub>2</sub> e)
<b>VCU Stack<sup>ab</sup></b>											
Gasoline	9.46	1,388	13,136	59.00	7.75E+05	1.00E-03	1.31E+01	1.00E-04	1.31E+00	7.76E+05	855.08
Diesel	0.01	1,388	9	59.00	5.19E+02	1.00E-03	8.80E-03	1.00E-04	8.80E-04	5.20E+02	0.57
Jet Kerosene	0.02	1,388	21	59.00	1.25E+03	1.00E-03	2.13E-02	1.00E-04	2.13E-03	1.25E+03	1.38
VCU Pilot	0.50	1,020	510	53.02	2.70E+04	1.00E-03	5.10E-01	1.00E-04	5.10E-02	2.71E+04	29.84
<b>Other Combustion Sources<sup>c</sup></b>											
Space Heaters, Furnaces			5,633	53.02	2.99E+05	1.00E-03	5.63E+00	1.00E-04	5.63E-01	2.99E+05	329.52
<b>TOTAL</b>	<b>9.99</b>		<b>19,309</b>		<b>1.10E+06</b>		<b>1.93E+01</b>		<b>1.93E+00</b>	<b>1.10E+06</b>	<b>1,216.39</b>

<sup>a</sup> GHG emissions are calculated for the combustion sources at the terminal. These include the VCU stack as well as the natural gas combustion sources. The GHG emissions are based on the annual throughputs for gasoline, diesel, jet kerosene and transmix at the VCU stack, and the capacity of the space heaters and furnaces.

<sup>b</sup> Combusted VOC is conservatively assumed to be 100% of VOC captured at the loading rack. Captured VOC is the product of the loading rack emission factor and maximum throughput of each product, as shown below, and at Table A-15b:

	EF, lb/Mgal	TP, Mgal/yr
Gasoline	5.95	256,230
Diesel	0.01	256,230
Jet Kerosene	0.01	473,040

VCU pilot has a maximum combustion rate of 0.5 MMscf/yr.

<sup>c</sup> Space heaters and furnaces, as shown in Table C-12a and Table C-12b. Multiplying Btu/hr by 8,760 hr/yr and dividing by 1,000,000 gives maximum MMBtu/yr flow rate of natural gas to the heaters.

<sup>d</sup> It is assumed that VOC combusted at the VCU has a heating value similar to that of refinery fuel gas, due to the presence of hydrocarbons larger than methane in the vapor stream. The heating value presented here is the default higher heating value for fuel gas specified in Table C-1 to 40 CFR 98. It is assumed that natural gas has the default higher heating value for natural gas specified in AP-42 section 1.4.

<sup>e</sup> Emission factors for fuel gas obtained from Table C-1 in 40 CFR 98 Subpart C. Emission factors specific to fuel gas are not available in Table C-2, so factors for natural gas are used.

<sup>f</sup> Emissions of GHG are calculated as follows:

$$\text{Emission rate, kg/yr CO}_2\text{e} = (\text{CO}_2 \text{ emission rate, kg/yr}) * (1 \text{ kg CO}_2\text{e} / \text{kg CO}_2) + (\text{CH}_4 \text{ emission rate, kg/yr}) * (21 \text{ kg CO}_2\text{e} / \text{kg CH}_4) + (\text{N}_2\text{O emission rate, kg/yr}) * (310 \text{ kg CO}_2\text{e} / \text{kg N}_2\text{O})$$

Conversions to CO<sub>2</sub>e are found in Table A-1 in 40 CFR 98 Subpart C, which gives the 100-year global warming potentials for each species using CO<sub>2</sub> as a reference species.

**Table C-20a. Vehicle Fugitive Dust - Road Data**

Road <sup>a</sup>	Length (ft)	Traveled (days/year)	Paved?	Trucks Loaded <sup>b</sup> (#/day)	Trucks Unloaded <sup>b</sup> (#/day)	Pickup Trucks <sup>b</sup> (#/day)	Average Weight (tons)	Vehicle Miles Traveled (VMT/yr)
Entrance Gate to 'Staging Area'	150	365	Yes	91.9	13.3	16.0	27.0	1,255.91
'Staging Area' through Farthest Bay to Exit	350	365	Yes	91.9	-	-	30.0	2,222.37
'Staging Area' through Offload Bay to Staging Area	450	365	Yes	-	6.6	-	30.0	206.34
Tank Farm Circuit - Paved	1,360	365	Yes	-	-	2.0	7.0	188.03
Tank Farm Circuit - Unpaved	920	365	No	-	-	2.0	7.0	127.20
'Staging Area' to Parking Lot	170	365	Yes	-	-	16.0	7.0	188.03
Contractor Circuit - Paved	1,360	90	Yes	-	-	4.0	7.0	92.73
Contractor Circuit - Unpaved	920	90	No	-	-	4.0	7.0	62.73

<sup>a</sup> Road data calculated individually according to methods in AP-42 13.2.1 and 13.2.2.

<sup>b</sup> Input data based on annual truck counts and annual on-site vehicle traffic estimates:

Trucks Loaded	33,526 trucks/year
Trucks Unloaded	2,421 trucks/year
Pickups Exiting Site	2,920 trucks/year
Pickups on Tank Farm Circuit	730 trucks/year
Trucks Loaded	60,000 lb (high est.)
Trucks Unloaded	60,000 lb (high est.)
Pickup Trucks	14,000 lb (high est.)

**Table C-20b. Vehicle Fugitive Dust Emissions by Road**

Road	Emission Factor (lb PM/VMT)	PM Emissions (tpy)	Emission Factor (lb PM <sub>10</sub> /VMT)	PM <sub>10</sub> Emissions (tpy)	Emission Factor (lb PM <sub>2.5</sub> /VMT)	PM <sub>2.5</sub> Emissions (tpy)
Entrance Gate to 'Staging Area'	1.63E-03	1.02E-03	1.33E-03	8.35E-04	3.26E-04	2.05E-04
'Staging Area' through Farthest Bay to Exit	1.82E-03	2.02E-03	1.48E-03	1.65E-03	3.64E-04	4.04E-04
'Staging Area' through Offload Bay to Staging Area	1.82E-03	1.88E-04	1.48E-03	1.53E-04	3.64E-04	3.76E-05
Tank Farm Circuit - Paved	4.12E-04	3.88E-05	3.36E-04	3.16E-05	8.25E-05	7.76E-06
Tank Farm Circuit - Unpaved	5.64E+00	3.58E-01	1.61E+00	1.02E-01	1.61E-01	1.02E-02
'Staging Area' to Parking Lot	4.12E-04	3.88E-05	3.36E-04	3.16E-05	8.25E-05	7.76E-06
Contractor Circuit - Paved	4.12E-04	1.91E-05	3.36E-04	1.56E-05	8.25E-05	3.82E-06
Contractor Circuit - Unpaved	5.64E+00	1.77E-01	1.61E+00	5.05E-02	1.61E-01	5.05E-03
TOTAL Paved		3.33E-03		2.71E-03		6.66E-04
TOTAL Unpaved		5.35E-01		1.53E-01		1.53E-02
TOTAL		<b>0.54</b>		<b>0.16</b>		<b>0.02</b>

<sup>a</sup> Emission factors from AP-42 13.2.1 and 13.2.2.

Paved Road Silt Content	0.015 g/m <sup>2</sup>		
Paved Road K Values			
PM	0.0027 lb/VMT		
PM <sub>10</sub>	0.0022 lb/VMT		
PM <sub>2.5</sub>	0.00054 lb/VMT		
Days of Precipitation Boise, ID	60 days/year		
Unpaved Road Silt Content	8.50% wt%		
Unpaved Road K Values	<b>k</b> , lb/VMT	<b>a</b>	<b>b</b>
PM	4.9	0.7	0.45
PM <sub>10</sub>	1.5	0.9	0.45
PM <sub>2.5</sub>	0.15	0.9	0.45

**Table C-20c. Heavy Equipment Operations**

Source	Days/Year	Shift Hours/Day	Emission Factor (lb PM/hr)	PM Emissions (tpy)	Emission Factor (lb PM <sub>10</sub> /VMT)	PM <sub>10</sub> Emissions (tpy)	Emission Factor (lb PM <sub>2.5</sub> /VMT)	PM <sub>2.5</sub> Emissions (tpy)
Heavy Equipment	45	12	5.06	<b>1.37</b>	1.03	<b>0.28</b>	0.53	<b>0.14</b>

<sup>a</sup> Emission factors from AP-42 11.9, recommended for this use in AP-42 13.2.3

Moisture content (geometric mean from AP-42 Table 11.9-3):	7.9% wt%
Unpaved Road Silt Content	8.50% wt%

## Appendix B – 40 CFR 60 Subpart Kb

Yellow highlighted text indicates sections that are applicable to the terminal.

***Bold and Italic*** text notes comments from Tesoro Logistics Operations LLC (TLO).

**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**

**Source Notes**

Source: 42 U.S.C. 7401–7601.

***This review is performed with the awareness that the terminal is subject to requirements under NESHAP Subpart BBBBBB. This Form FRA documents only those NSPS Kb requirements that directly apply to the terminal's tanks; not those that become applicable because they are cited in NESHAP 6B.***

**§ 60.110b Applicability and designation of affected facility.**

**60.110b(a)**

Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters ( $m^3$ ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

**60.110b(b)**

This subpart does not apply to storage vessels with a capacity greater than or equal to 151  $m^3$  storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75  $m^3$  but less than 151  $m^3$  storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

***40 CFR 60 Subpart Kb (NSPS Kb) applies to certain tanks at the terminal. As specified in this paragraph, the Subpart applies to certain tanks with:***

- ***sufficient size,***
- ***storing VOL with sufficiently high vapor pressure, and***
- ***constructed/reconstructed/modified after the applicability date of July 23, 1984.***

***Currently, the tanks which meet these criteria are Tank 202, Tank 203, and Tank 204.***

- ***Their capacities are greater than 151  $m^3$ ;***
- ***They were modified after the applicability date of July 23, 1984; and***
- ***They store gasoline. The RVP of gasoline used for assessing the terminal's Potential to Emit (PTE) in the Tier I renewal application is 15. The maximum monthly ambient temperature used for assessing maximum true vapor pressure is 74 °F according to meteorological data for Boise, ID distributed with EPA's TANKS 4.0.9d software. RVP 15 gasoline vapor pressure can be estimated by using API nomographs provided in AP-42 Section 7.1, yielding a maximum true vapor pressure of approximately 10 psia (70 kPa).***

***Other tanks are exempt from NSPS Kb. The following Table 5-1 was presented in the Tier I***

renewal application, documenting the rationale why all other tanks are exempt. The contents of this table remain accurate with regard to the terminal's product storage as of this submittal.

In summary:

The terminal does not operate any storage tanks with capacities greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup>, so the 15.0 kPa threshold for these tanks is not applicable to the terminal.

Tanks A201 through A208, which store additives for blending, are exempt because of their size, less than 75 m<sup>3</sup>. Tanks 400 through 404 store wastewater, which is not a VOL.

Tanks 1 through 9, 162, 163, 201, 205, 206, and 207 store diesel or jet kerosene, for which the true vapor pressure does not exceed 3.5 kPa (0.507 psia). Maximum true vapor pressures for each VOL were estimated for month-by-month tank emission calculations by interpolating data from from EPA's AP-42 emission factor guide, Table 7.1-2. The estimates are as follows:

- Jet Kerosene: 0.085 kPa
- Diesel: 0.065 kPa

Tanks 12, 13, 14, 164, 165, 166, 167, 208, and 209 were constructed or last modified prior to the applicability date of NSPS Kb.

Table 0-1. NSPS Kb Applicability by Tank

Tank Number	Subject to NSPS Kb?	Reason(s) for Inapplicability of NSPS Kb
1	No	Does not store gasoline/transmix/ethanol.
2	No	Does not store gasoline/transmix/ethanol.
3	No	Does not store gasoline/transmix/ethanol.
4	No	Does not store gasoline/transmix/ethanol.
5	No	Does not store gasoline/transmix/ethanol.
6	No	Does not store gasoline/transmix/ethanol.
7	No	Does not store gasoline/transmix/ethanol.
8	No	Does not store gasoline/transmix/ethanol.
9	No	Out of service. Does not store gasoline/transmix/ethanol.
12	No	Constructed prior to applicability date.
13	No	Constructed prior to applicability date.
14	No	Constructed prior to applicability date.
162	No	Does not store gasoline/transmix/ethanol.
163	No	Does not store gasoline/transmix/ethanol.
164	No	Constructed prior to applicability date.
165	No	Constructed prior to applicability date.
166	No	Constructed prior to applicability date.
167	No	Constructed prior to applicability date.
200	No	Constructed prior to applicability date.
201	No	Does not store gasoline/transmix/ethanol.
202	Yes	--
203	Yes	--
204	Yes	--
205	No	Does not store gasoline/transmix/ethanol.
206	No	Does not store gasoline/transmix/ethanol.
207	No	Does not store gasoline/transmix/ethanol.
208	No	Constructed prior to applicability date.
209	No	Constructed prior to applicability date.
400	No	Out of service. Does not store gasoline/transmix/ethanol.
401	No	Out of service. Does not store gasoline/transmix/ethanol.
402	No	Does not store gasoline/transmix/ethanol.

403	No	Does not store gasoline/transmix/ethanol.
404	No	Does not store gasoline/transmix/ethanol.
A201	No	Capacity less than 75 m <sup>3</sup>
A202	No	Capacity less than 75 m <sup>3</sup>
A203	No	Capacity less than 75 m <sup>3</sup>
A204	No	Capacity less than 75 m <sup>3</sup>
A205	No	Capacity less than 75 m <sup>3</sup>
A206	No	Capacity less than 75 m <sup>3</sup>
A207	No	Capacity less than 75 m <sup>3</sup>
A208	No	Capacity less than 75 m <sup>3</sup>

<sup>a</sup> Gasoline, transmix, and ethanol have maximum true vapor pressures that are sufficiently high to trigger NSPS Subpart Kb. Diesel fuel and jet kerosene do not.

#### 60.110b(c)

[Reserved]

#### 60.110b(d)

This subpart does not apply to the following:

***This exemption applies to the terminal because the terminal brings mobile vehicles onsite with mobile gasoline cargo tanks attached to the vehicles. These vehicle tanks are exempt from NSPS Kb.***

#### 60.110b(d)(1)

Vessels at coke oven by-product plants.

***This exemption does not apply to the terminal because the terminal is not a coke oven by-product plant.***

#### 60.110b(d)(2)

Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

***This exemption does not apply to the terminal because the terminal does not operate pressure vessels in excess of 204.9 kPa.***

#### 60.110b(d)(3)

Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

***This exemption applies to the terminal because the terminal brings mobile vehicles onsite with mobile gasoline cargo tanks attached to the vehicles. These vehicle tanks are exempt from NSPS Kb.***

#### 60.110b(d)(4)

Vessels with a design capacity less than or equal to 1,589.874 m<sup>3</sup> used for petroleum or condensate stored, processed, or treated prior to custody transfer.

***This exemption does not apply to the terminal because the terminal does not store petroleum or condensate upstream of the point of custody transfer.***

#### **60.110b(d)(5)**

Vessels located at bulk gasoline plants.

*This exemption does not apply to the terminal because the terminal does not meet the NSPS Kb definition of a "bulk gasoline plant:" "Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person." (40 CFR 60.111b) The terminal has a maximum design gasoline throughput of greater than 75,700 liters per day.*

#### **60.110b(d)(6)**

Storage vessels located at gasoline service stations.

*This exemption does not apply to the terminal because the terminal is not a gasoline service station. The terminal does not "[dispense gasoline] to motor vehicle fuel tanks from stationary storage tanks." (40 CFR 60.111b)*

#### **60.110b(d)(7)**

Vessels used to store beverage alcohol.

*This exemption does not apply to the terminal because the terminal does not store beverage alcohol.*

#### **60.110b(d)(8)**

Vessels subject to subpart GGGG of 40 CFR part 63.

*This exemption does not apply to the terminal because the terminal operates no vessels subject to 40 CFR 63 Subpart GGGG, "National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production."*

#### **60.110b(e) Alternative means of compliance—**

*Paragraph (e) does not apply to the terminal because terminal currently does not rely on alternative means of compliance with NSPS Kb for Tanks 202, 203 or 204.*

#### **60.110b(e)(1) Option to comply with part 65.**

Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of § 60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

#### **60.110b(e)(1)(i)**

A storage vessel with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

### **60.110b(e)(1)(ii)**

A storage vessel with a design capacity greater than 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

### **60.110b(e)(2) Part 60, subpart A.**

Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

### **60.110b(e)(3) Internal floating roof report.**

If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

### **60.110b(e)(4) External floating roof report.**

If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

## **§ 60.111b Definitions.**

***All definitions are assumed to apply to the terminal insofar as they are used to interpret this regulation. TLO has used the definitions in preparing this regulatory review.***

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

***Bulk gasoline plant*** means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

***Condensate*** means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

***Custody transfer*** means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

***Fill*** means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

***Gasoline service station*** means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

*Maximum true vapor pressure* means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

- (1) In accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or
- (2) As obtained from standard reference texts; or
- (3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see § 60.17);
- (4) Any other method approved by the Administrator.

*Petroleum* means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

*Petroleum liquids* means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

*Process tank* means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

*Reid vapor pressure* means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see § 60.17).

*Storage vessel* means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;
- (2) Subsurface caverns or porous rock reservoirs; or
- (3) Process tanks.

*Volatile organic liquid (VOL)* means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

*Waste* means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

**All definitions are assumed to apply to the terminal insofar as they are used to interpret this regulation. TLO has used the definitions in preparing this regulatory review.**

## **§ 60.112b Standard for volatile organic compounds (VOC).**

### **60.112b(a)**

The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

*Paragraph (a) applies to Tanks 202, 203, and 204, which are subject to NSPS Kb and which are required to use one of the control technologies identified below. Tanks 202, 203, and 204 are greater than 151 m<sup>3</sup> in capacity, and store a VOL with maximum true vapor pressure greater than 5.2 kPa but less than 76.6 kPa.*

*The terminal does not operate any storage tanks with capacities greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup>, so the 27.6 kPa and 76.6 kPa thresholds for these tanks are not applicable to the terminal.*

*The RVP of gasoline used for assessing the terminal's Potential to Emit (PTE) in the Tier I renewal application is 15. The maximum monthly ambient temperature used for assessing maximum true vapor pressure is 74 °F according to meteorological data for Boise, ID distributed with EPA's TANKS 4.0.9d software. RVP 15 gasoline vapor pressure can be estimated by using API nomographs provided in AP-42 Section 7.1, yielding a maximum true vapor pressure of approximately 10 psia (70 kPa).*

*Tanks 202, 203, and 204 are required to comply with NSPS Kb control standards by using either an internal floating roof (IFR), an external floating roof (EFR), a closed vent system and control device, or an equivalent control system to reduce emissions from each gasoline tank. Tanks 202, 203, and 204 currently comply with NSPS Kb by using an EFR design.*

### **60.112b(a)(1)**

A fixed roof in combination with an internal floating roof meeting the following specifications:

*Tanks 202, 203, and 204 currently comply with NSPS Kb by using an EFR design which appears in §60.112b(a)(2). Currently, no tanks at the terminal are required to comply with NSPS Kb and use an internal floating roof design to do so. Therefore, no provisions of paragraph (a)(1) apply to the terminal.*

### **60.112b(a)(1)(i)**

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 or subsequently 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.

### **60.112b(a)(1)(ii)**

Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

**60.112b(a)(1)(ii)(A)**

A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

**60.112b(a)(1)(ii)(B)**

Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

**60.112b(a)(1)(ii)(C)**

A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

**60.112b(a)(1)(iii)**

Each opening in a noncontact 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.

**60.112b(a)(1)(iv)**

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 is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

**60.112b(a)(1)(v)**

Automatic bleeder vents shall be equipped with a gasket and are to 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.

**60.112b(a)(1)(vi)**

Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

**60.112b(a)(1)(vii)**

Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

**60.112b(a)(1)(viii)**

Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

**60.112b(a)(1)(ix)**

Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed

sliding cover.

### **60.112b(a)(2)**

An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

***Tanks 202, 203, and 204 currently comply with NSPS Kb by using an EFR design which paragraph (a)(2) regulates. Therefore, all provisions of this paragraph apply to Tanks 202, 203, and 204. No other tanks at the terminal are subject to NSPS Kb.***

### **60.112b(a)(2)(i)**

Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

### **60.112b(a)(2)(i)(A)**

The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

### **60.112b(a)(2)(i)(B)**

The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

### **60.112b(a)(2)(ii)**

Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to 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. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

### **60.112b(a)(2)(iii)**

The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

### **60.112b(a)(3)**

A closed vent system and control device meeting the following specifications:

### **60.112b(a)(3)(i)**

The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

#### **60.112b(a)(3)(ii)**

The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

#### **60.112b(a)(4)**

A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

#### **60.112b(b)**

The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m<sup>3</sup> which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

*TLO does not currently store any liquid with a maximum true vapor pressure in excess of 76.6 kPa (11.1 psia) at the terminal. Therefore, no provisions of paragraph (b) apply to the terminal.*

#### **60.112b(b)(1)**

A closed vent system and control device as specified in § 60.112b(a)(3).

*TLO does not currently store any liquid with a maximum true vapor pressure in excess of 76.6 kPa (11.1 psia) at the terminal. Therefore, no provisions of paragraph (b) apply to the terminal.*

#### **60.112b(b)(2)**

A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

*TLO does not currently store any liquid with a maximum true vapor pressure in excess of 76.6 kPa (11.1 psia) at the terminal. Therefore, no provisions of paragraph (b) apply to the terminal.*

#### **60.112b(c) Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.**

This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

*The provisions of paragraph (c) are specific to the Stonewall Plant; therefore, none of the provisions of paragraph (c) apply to the terminal.*

### **60.112b(c)(1)**

For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

### **60.112b(c)(2)**

For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

### **§ 60.113b Testing and procedures.**

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to this paragraph, specifically to paragraph (b).***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design or a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraphs (a), (c), and (d) apply to the terminal.***

### **60.113b(a)**

After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

### **60.113b(a)(1)**

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 VOL. 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.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

**60.113b(a)(2)**

For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or 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 VOL 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 required in this paragraph 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 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.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

**60.113b(a)(3)**

For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

**60.113b(a)(3)(i)**

Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

**60.113b(a)(3)(ii)**

Visually inspect the vessel as specified in paragraph (a)(2) of this section.

**60.113b(a)(4)**

Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in

the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

#### **60.113b(a)(5)**

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 paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator 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 that it is received by the Administrator at least 7 days prior to the refilling.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using IFR design. For these reasons, none of the provisions in §60.113b paragraph (a) apply to the terminal.***

#### **60.113b(b)**

After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(1)**

Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(1)(i)**

Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(1)(ii)**

Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(1)(iii)**

If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(2)**

Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(2)(i)**

Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(2)(ii)**

Measure seal gaps around the 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 wall of the storage vessel and measure the circumferential distance of each such location.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(2)(iii)**

The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(3)**

Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)**

Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)(i)**

The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed  $212 \text{ Cm}^2$  per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)(i)(A)**

One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)(i)(B)**

There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

#### **60.113b(b)(4)(ii)**

The secondary seal is to meet the following requirements:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)(ii)(A)**

The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

#### **60.113b(b)(4)(ii)(B)**

The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

#### **60.113b(b)(4)(ii)(C)**

There are to be no holes, tears, or other openings in the seal or seal fabric.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(4)(iii)**

If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) 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 Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(5)**

Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).***

#### **60.113b(b)(6)**

Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design***

*gasoline tanks, so they are subject to all provisions of §60.113b(b).*

#### **60.113b(b)(6)(i)**

If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).*

#### **60.113b(b)(6)(ii)**

For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator 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 that it is received by the Administrator at least 7 days prior to the refilling.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to all provisions of §60.113b(b).*

#### **60.113b(c)**

The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.*

*The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraph (c) apply to the terminal.*

#### **60.113b(c)(1)**

Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.*

*The terminal does not currently operate any tanks subject to NSPS Kb that comply with the*

***standard using a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraph (c) apply to the terminal.***

**60.113b(c)(1)(i)**

Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 ° C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraph (c) apply to the terminal.***

**60.113b(c)(1)(ii)**

A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraph (c) apply to the terminal.***

**60.113b(c)(2)**

Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using a closed vent system and control device. For these reasons, none of the provisions in §60.113b paragraph (c) apply to the terminal.***

**60.113b(d)**

The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.113b(b) rather than to this paragraph.***

***The terminal does not currently operate any tanks subject to NSPS Kb that comply with the standard using a closed vent system and flare. For these reasons, none of the provisions in §60.113b paragraph (d) apply to the terminal.***

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

#### **§ 60.114b Alternative means of emission limitation.**

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks. TLO has the opportunity to use the provisions of § 60.114b to evaluate alternative means of emission limitation for the emission standards under § 60.112b. Currently, the tanks at the terminal are in compliance with the standards under § 60.112b and do not use alternative means of emission limitation published in the Federal Register.***

***Therefore, the provisions in §60.114b have been marked not applicable, as the applicability notation in this form is limited to regulations that currently apply.***

#### **60.114b(a)**

If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the *Federal Register* a notice permitting the use of the alternative means for purposes of compliance with that requirement.

#### **60.114b(b)**

Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

#### **60.114b(c)**

Any person seeking permission under this section shall submit to the Administrator a written application including:

#### **60.114b(c)(1)**

An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

#### **60.114b(c)(2)**

An engineering evaluation that the Administrator determines is an accurate method of determining

equivalence.

#### **60.114b(d)**

The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

#### **§ 60.115b Reporting and recordkeeping requirements.**

The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to this paragraph and to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

#### **60.115b(a)**

After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

#### **60.115b(a)(1)**

Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

#### **60.115b(a)(2)**

Keep a record of each inspection performed as required by § 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). 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).

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

### **60.115b(a)(3)**

If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

### **60.115b(a)(4)**

After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 61.112b(a)(1) or § 60.113b(a)(3) and list each repair made.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to IFR tanks are not marked applicable because the terminal currently does not operate any IFR tanks subject to NSPS Kb.***

### **60.115b(b)**

After installing control equipment in accordance with § 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).***

### **60.115b(b)(1)**

Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). However, this paragraph (b)(1) applies to the tanks' notifications of actual date of initial startup, under 40 CFR 60.7(a)(3). Therefore, this paragraph (b)(1) has already been completed and does not constitute an ongoing requirement.***

### **60.115b(b)(2)**

Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).***

**60.115b(b)(2)(i)**

The date of measurement.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).*

**60.115b(b)(2)(ii)**

The raw data obtained in the measurement.

**60.115b(b)(2)(iii)**

The calculations described in § 60.113b (b)(2) and (b)(3).

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).*

**60.115b(b)(3)**

Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).*

**60.115b(b)(3)(i)**

The date of measurement.

**60.115b(b)(3)(ii)**

The raw data obtained in the measurement.

**60.115b(b)(3)(iii)**

The calculations described in § 60.113b (b)(2) and (b)(3).

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).*

**60.115b(b)(4)**

After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

*As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b).*

### **60.115b(c)**

After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records..

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to tanks subject to NSPS Kb and complying with a closed vent system and control device are not marked applicable, because the terminal currently does not operate any such tanks.***

### **60.115b(c)(1)**

A copy of the operating plan.

### **60.115b(c)(2)**

A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

### **60.115b(d)**

After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb. They are EFR-design gasoline tanks, so they are subject to §60.115b(b). Provisions applying to tanks subject to NSPS Kb and complying with a closed vent system and flare are not marked applicable, because the terminal currently does not operate any such tanks.***

### **60.115b(d)(1)**

A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

### **60.115b(d)(2)**

Records shall be kept of all periods of operation during which the flare pilot flame is absent.

### **60.115b(d)(3)**

Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

## **§ 60.116b Monitoring of operations.**

### **60.116b(a)**

The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

***As described above, Tanks 202, 203, and 204 are subject to NSPS Kb, so they are required to comply with the recordkeeping requirements in §60.116b(a).***

#### **60.116b(b)**

The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

***TLO keeps records of the dimensions and capacities of storage vessels. As described above, the capacities of Tanks A201 through A208 are used as documentation that these vessels are not subject to NSPS Kb.***

#### **60.116b(c)**

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<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> 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.

***Tanks 202, 203, and 204 are subject to NSPS Kb and are subject to this requirement. TLO demonstrates continuous compliance with this requirement by keeping records of liquid types stored in Tanks 202, 203, and 204.***

***The terminal does not operate any storage tanks with capacities greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup>, so the 15.0 kPa threshold for these tanks is not applicable to the terminal.***

***The maximum true vapor pressures of gasoline, transmix, and denatured ethanol at the terminal clearly exceed 5.2 kPa (0.75 psia), the threshold for emission control, while the maximum true vapor pressures of diesel and jet kerosene clearly do not exceed 3.5 kPa (0.51 psia). Therefore, the terminal is not required to keep records of VOL storage for diesel or jet kerosene.***

***Maximum true vapor pressures for each VOL were estimated for month-by-month tank emission calculations by interpolating data from EPA's AP-42 emission factor guide, Table 7.1-2. The estimates are as follows:***

- ***Jet Kerosene: 0.085 kPa***
- ***Diesel: 0.065 kPa***

#### **60.116b(d)**

Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

***TLO currently does not store any liquids with maximum true vapor pressures between 3.5 kPa (0.51 psia, the NSPS Kb subpart's applicability threshold in 40 CFR 60.110b above) and 5.2 kPa***

*(0.75 psia). Tanks 202, 203, and 204 store gasoline with maximum true vapor pressure clearly in excess of 5.2 kPa.*

*Therefore, §60.116b(d) has been marked not applicable, as the applicability notation in this form is limited to regulations that currently apply.*

#### **60.116b(e)**

Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

*TLO is required to calculate maximum true vapor pressure for Tanks 202, 203, and 204, which are subject to NSPS Kb.*

*All storage tanks at the terminal are at ambient temperature, so the ambient temperature method is used to calculate maximum true vapor pressure.*

*The RVP of gasoline used for assessing the terminal's Potential to Emit (PTE) in the Tier I renewal application is 15. The maximum monthly ambient temperature used for assessing maximum true vapor pressure is 74 °F according to meteorological data for Boise, ID distributed with EPA's TANKS 4.0.9d software. RVP 15 gasoline vapor pressure can be estimated by using API nomographs provided in AP-42 Section 7.1, yielding a maximum true vapor pressure of approximately 10 psia (70 kPa).*

#### **60.116b(e)(1)**

For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

*All storage tanks at the terminal are at ambient temperature, so the ambient temperature method is used to calculate maximum true vapor pressure.*

#### **60.116b(e)(2)**

For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

#### **60.116b(e)(2)(i)**

Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month 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 terminal uses nomographs from API to determine maximum true vapor pressure for gasoline. The nomographs are reprinted in EPA's AP-42 emission factor guide as Figure 7.1-14a, cited to API Bulletin 2519, and converted to an equation in Figure 7.1-14b. This equation is used to determine gasoline maximum true vapor pressure from RVP and ASTM distillation slope. The RVP of gasoline used for assessing the terminal's Potential to Emit (PTE) in the Tier I renewal application is 15. The maximum monthly ambient temperature used for assessing maximum true vapor pressure is 74 °F according to meteorological data for Boise, ID distributed with EPA's*

**TANKS 4.0.9d software. RVP 15 gasoline vapor pressure can be estimated by using API nomographs provided in AP-42 Section 7.1, yielding a maximum true vapor pressure of approximately 10 psia (70 kPa).**

**60.116b(e)(2)(ii)**

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.

**Paragraph (e)(2)(ii) does not apply because the terminal does not store crude oils.**

**60.116b(e)(3)**

For other liquids, the vapor pressure:

**60.116b(e)(3)(i)**

May be obtained from standard reference texts, or

**Paragraph (e)(3)(i) applies to the terminal because the terminal uses EPA's AP-42 emission factor guide, Table 7.1-2, to evaluate the maximum true vapor pressures of diesel and jet kerosene.**

**Maximum true vapor pressures for these VOLs were estimated for month-by-month tank emission calculations by interpolating data from from EPA's AP-42 emission factor guide, Table 7.1-2. The estimates are as follows:**

- **Jet Kerosene: 0.085 kPa**
- **Diesel: 0.065 kPa**

**60.116b(e)(3)(ii)**

Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

**60.116b(e)(3)(iii)**

Measured by an appropriate method approved by the Administrator; or

**60.116b(e)(3)(iv)**

Calculated by an appropriate method approved by the Administrator.

**The terminal calculates the maximum true vapor pressure for denatured ethanol using the true vapor pressures of gasoline (see above) and pure ethanol (using the Antoine coefficients from EPA's TANKS 4.0.9d software) and an average gasoline composition in denatured ethanol. The terminal calculates the maximum true vapor pressure of transmix using the true vapor pressures of gasoline (API nomographs) and diesel and jet kerosene (interpolated from AP-42 Table 7.1-2), and a transmix composition conservatively weighted toward gasoline (25%, 27% jet, 48% diesel).**

**60.116b(f)**

The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition

shall be subject to the following requirements.

***The terminal currently stores transmix. The maximum true vapor pressure for transmix is calculated according to §60.116b(f); however, TLO has not stored transmix in any tanks that have been constructed, modified or reconstructed after the applicability date of NSPS Kb.***

***Transmix storage does not take place in Tanks 202, 203, or 204—those tanks currently subject to NSPS Kb.***

***For this reason, these provisions at §60.116b(f) are not currently applicable. The provisions in §60.116b(f) have been marked not applicable, as the applicability notation in this form is limited to regulations that currently apply.***

#### **60.116b(f)(1)**

Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

#### **60.116b(f)(2)**

For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

##### **60.116b(f)(2)(i)**

ASTM D2879–83, 96, or 97 (incorporated by reference—see § 60.17); or

##### **60.116b(f)(2)(ii)**

ASTM D323–82 or 94 (incorporated by reference—see § 60.17); or

##### **60.116b(f)(2)(iii)**

As measured by an appropriate method as approved by the Administrator.

#### **60.116b(g)**

The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

***The terminal does not currently operate any tanks subject to NSPS Kb that comply by using a closed vent system with control device. As noted above, Tanks 202, 203, and 204 are subject to NSPS Kb, and these tanks are EFR-design tanks. Therefore, §60.116b(g) has been marked not applicable, as the applicability notation in this form is limited to regulations that currently apply.***

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

#### **§ 60.117b Delegation of authority.**

**60.117b(a)**

In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

**60.117b(b)**

Authorities which will not be delegated to States: § § 60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

*The provisions of §60.117b are applicable to the delegated authorities rather than to the terminal.*

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

**Appendix C – 40 CFR 60 Subpart XX**

Highlighted text indicated applicable sections.

***Bold and Italic*** text notes TLO comments.

## **SUBPART XX—Standards of Performance for Bulk Gasoline Terminals**

### **Source Notes**

**Source:** 48 FR 37590, Aug. 18, 1983, unless otherwise noted.

### **§ 60.500 Applicability and designation of affected facility.**

#### **60.500(a)**

The affected facility to which the provisions of this subpart apply is the total of all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks.

#### **60.500(b)**

Each facility under paragraph (a) of this section, the construction or modification of which is commenced after December 17, 1980, is subject to the provisions of this subpart.

***The loading rack at the terminal is currently subject to this NSPS. As stated in the statement of basis for the terminal's Tier I operating permit issued on January 22, 2003: "Subpart XX applies to the loading rack...and requires the affected facility be equipped with a vapor destruction unit (VDU) designed to collect and oxidize the total organic compounds" (p. 8).***

#### **60.500(c)**

For purposes of this subpart, any replacement of components of an existing facility, described in paragraph (a) of this section, commenced before August 18, 1983 in order to comply with any emission standard adopted by a State or political subdivision thereof will not be considered a reconstruction under the provisions of 40 CFR 60.15.

Note: The intent of these standards is to minimize the emissions of VOC through the application of best demonstrated technologies (BDT). The numerical emission limits in this standard are expressed in terms of total organic compounds. This emission limit reflects the performance of BDT.

***Because the loading rack at the terminal is currently subject to this NSPS, the loading rack does not need to maintain an evaluation of its status with regard to NSPS reconstruction provisions. Therefore, the terminal does not need to rely on §60.500(c), which is a limited exemption from reconstruction for certain projects undertaken before August 18, 1983. This section has been marked not applicable because the terminal's compliance demonstration method does not rely on or make reference to this section.***

### **§ 60.501 Definitions.**

***All definitions are assumed to apply to the terminal insofar as they are used to interpret this regulation. TLO has used the definitions in preparing this regulatory review.***

The terms used in this subpart are defined in the Clean Air Act, in § 60.2 of this part, or in this section as follows:

*Bulk gasoline terminal* means any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person.

*Continuous vapor processing system* means a vapor processing system that treats total organic compounds vapors collected from gasoline tank trucks on a demand basis without intermediate accumulation in a vapor holder.

*Existing vapor processing system* means a vapor processing system [capable of achieving emissions to the atmosphere no greater than 80 milligrams of total organic compounds per liter of gasoline loaded], the construction or refurbishment of which was commenced before December 17, 1980, and which was not constructed or refurbished after that date.

*Flare* means a thermal oxidation system using an open (without enclosure) flame.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater which is used as a fuel for internal combustion engines.

*Gasoline tank truck* means a delivery tank truck used at bulk gasoline terminals which is loading gasoline or which has loaded gasoline on the immediately previous load.

*Intermittent vapor processing system* means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compounds vapors collected from gasoline tank trucks, and treats the accumulated vapors only during automatically controlled cycles.

*Loading rack* means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill delivery tank trucks.

*Refurbishment* means, with reference to a vapor processing system, replacement of components of, or addition of components to, the system within any 2-year period such that the fixed capital cost of the new components required for such component replacement or addition exceeds 50 percent of the cost of a comparable entirely new system.

*Thermal oxidation system* means a combustion device used to mix and ignite fuel, air pollutants, and air to provide a flame to heat and oxidize hazardous air pollutants. Auxiliary fuel may be used to heat air pollutants to combustion temperatures.

*Total organic compounds* means those compounds measured according to the procedures in § 60.503.

*Vapor collection system* means any equipment used for containing total organic compounds vapors displaced during the loading of gasoline tank trucks.

*Vapor processing system* means all equipment used for recovering or oxidizing total organic compounds vapors displaced from the affected facility.

*Vapor-tight gasoline tank truck* means a gasoline tank truck which has demonstrated within the 12 preceding months that its product delivery tank will sustain a pressure change of not more than 750 pascals (75 mm of water) within 5 minutes after it is pressurized to 4,500 pascals (450 mm of water). This capability is to be demonstrated using the pressure test procedure specified in Method 27.

**All definitions are assumed to apply to the terminal insofar as they are used to interpret this regulation. TLO has used the definitions in preparing this regulatory review.**

[48 FR 37590, Aug. 18, 1983, as amended at 65 FR 61763, Oct. 17, 2000; 68 FR 70965, Dec. 19, 2003]

**§ 60.502 Standard for Volatile Organic Compound (VOC) emissions from bulk gasoline terminals.**

On and after the date on which § 60.8(a) requires a performance test to be completed, the owner or operator of each bulk gasoline terminal containing an affected facility shall comply with the requirements of this section.

***The loading rack at the terminal is a new loading rack with respect to the definitions of this subpart. Therefore the loading rack is required to comply with §60.502. An initial performance test in compliance with 60.8(a) was performed on September 2, 1994.***

**60.502(a)**

Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.

***The loading rack at the terminal is a new loading rack with respect to the definitions of this subpart. Therefore the loading rack is required to comply with §60.502(a).***

**60.502(b)**

The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded, except as noted in paragraph (c) of this section.

***The loading rack at the terminal is a new loading rack with respect to the definitions of this subpart. Therefore the loading rack is required to comply with the emission standard at §60.502(b). Emissions to the atmosphere from the vapor collection and processing systems due to the loading of gasoline cargo tanks shall not exceed 35 milligrams of total organic compounds per liter of gasoline loaded.***

**60.502(c)**

For each affected facility equipped with an existing vapor processing system, the emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 80 milligrams of total organic compounds per liter of gasoline loaded.

***The loading rack at the terminal is a new loading rack with respect to the definitions of this subpart. Therefore the loading rack is required to comply with the emission standard at §60.502(b) and not the standard in this section for existing loading racks.***

**60.502(d)**

Each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.

***The loading rack at the terminal is subject to §60.502. The loading rack is required to comply with this work practice.***

**60.502(e)**

Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). TLO demonstrates continuous compliance with this standard by design. TLO's product loading rack is equipped with an automatic system that checks vapor tightness certification numbers from each tank truck against a database of validated certifications. Should the truck not present valid vapor tightness certification, the automated system prevents the truck from loading gasoline.***

#### **60.502(e)(1)**

The owner or operator shall obtain the vapor tightness documentation described in § 60.505(b) for each gasoline tank truck which is to be loaded at the affected facility.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5).***

#### **60.502(e)(2)**

The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5).***

#### **60.502(e)(3)**

##### **60.502(e)(3)(i)**

The owner or operator shall cross-check each tank identification number obtained in paragraph (e)(2) of this section with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5).***

##### **60.502(e)(3)(i)(A)**

If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). Paragraphs (e)(3)(i)(A) and (B) are both marked applicable because either situation is possible during a given period of 26 or 52 weeks.***

##### **60.502(e)(3)(i)(B)**

If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). Paragraphs (e)(3)(i)(A) and (B) are both marked applicable because either situation is possible during a given period of 26 or 52 weeks.***

##### **60.502(e)(3)(ii)**

If either the quarterly or semiannual cross-check provided in paragraphs (e)(3)(i) (A) through (B) of this section reveals that these conditions were not maintained, the source must return to biweekly monitoring until such time as these conditions are again met.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). Paragraphs (e)(3)(ii) is marked applicable because paragraphs (i)(A) and (B) are marked applicable.***

#### **60.502(e)(4)**

The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the documentation cross-check in paragraph (e)(3) of this section.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e) (1)-(5).***

#### **60.502(e)(5)**

The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). TLO demonstrates continuous compliance with this standard by design. TLO's product loading rack is equipped with an automatic system that checks vapor tightness certification numbers from each tank truck against a database of validated certifications. Should the truck not present valid vapor tightness certification, the automated system prevents the truck from loading gasoline.***

#### **60.502(e)(6)**

Alternate procedures to those described in paragraphs (e)(1) through (5) of this section for limiting gasoline tank truck loadings may be used upon application to, and approval by, the Administrator.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with all provisions of §60.502(e)(1)-(5). TLO is not currently using an alternate procedure to paragraphs (e)(1)-(5), so paragraph (e)(6) concerning alternate procedures is marked not applicable.***

#### **60.502(f)**

The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with this work practice.***

#### **60.502(g)**

The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with this work practice.***

#### **60.502(h)**

The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in § 60.503(d).

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with this work practice.***

#### **60.502(i)**

No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water).

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with this work practice.***

#### **60.502(j)**

Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

***The loading rack at the terminal is subject to this subpart. The loading rack is required to comply with this work practice.***

[48 FR 37590, Aug. 18, 1983; 48 FR 56580, Dec. 22, 1983, as amended at 54 FR 6678, Feb. 14, 1989; 64 FR 7466, Feb. 12, 1999]

### **§ 60.503 Test methods and procedures.**

#### **60.503(a)**

In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). The three-run requirement of § 60.8(f) does not apply to this subpart.

***The loading rack at the terminal is subject to this subpart. An initial performance test in compliance with 60.8(a) was performed on September 2, 1994. At that time, the terminal relied on §60.503 to conduct the test. The terminal complies with these conditions by maintaining documentation of the initial performance test onsite.***

#### **60.503(b)**

Immediately before the performance test required to determine compliance with § 60.502 (b), (c), and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the

terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.

**See note on §60.503(a).**

### **60.503(c)**

The owner or operator shall determine compliance with the standards in § 60.502 (b) and (c) as follows:

**See note on §60.503(a).**

#### **60.503(c)(1)**

The performance test shall be 6 hours long during which at least 300,000 liters of gasoline is loaded. If this is not possible, the test may be continued the same day until 300,000 liters of gasoline is loaded or the test may be resumed the next day with another complete 6-hour period. In the latter case, the 300,000-liter criterion need not be met. However, as much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs.

**See note on §60.503(a).**

#### **60.503(c)(2)**

If the vapor processing system is intermittent in operation, the performance test shall begin at a reference vapor holder level and shall end at the same reference point. The test shall include at least two startups and shutdowns of the vapor processor. If this does not occur under automatically controlled operations, the system shall be manually controlled.

**See note on §60.503(a).**

#### **60.503(c)(3)**

The emission rate (E) of total organic compounds shall be computed using the following equation:

$$E = K \sum_{i=1}^n (V_{ei} C_{ei}) / (L \cdot 10^6)$$

where:

E=emission rate of total organic compounds, mg/liter of gasoline loaded.

$V_{ei}$ =volume of air-vapor mixture exhausted at each interval "i", scm.

$C_{ei}$ =concentration of total organic compounds at each interval "i", ppm.

L=total volume of gasoline loaded, liters.

n=number of testing intervals.

i=emission testing interval of 5 minutes.

K=density of calibration gas,  $1.83 \times 10^6$  for propane and  $2.41 \times 10^6$  for butane, mg/scm.

**See note on §60.503(a).**

**60.503(c)(4)**

The performance test shall be conducted in intervals of 5 minutes. For each interval "i", readings from each measurement shall be recorded, and the volume exhausted ( $V_{esi}$ ) and the corresponding average total organic compounds concentration ( $C_{ei}$ ) shall be determined. The sampling system response time shall be considered in determining the average total organic compounds concentration corresponding to the volume exhausted.

*See note on §60.503(a).*

**60.503(c)(5)**

The following methods shall be used to determine the volume ( $V_{esi}$ ) air-vapor mixture exhausted at each interval:

*See note on §60.503(a).*

**60.503(c)(5)(i)**

Method 2B shall be used for combustion vapor processing systems.

*See note on §60.503(a).*

**60.503(c)(5)(ii)**

Method 2A shall be used for all other vapor processing systems.

*See note on §60.503(a).*

**60.503(c)(6)**

Method 25A or 25B shall be used for determining the total organic compounds concentration ( $C_{ei}$ ) at each interval. The calibration gas shall be either propane or butane. The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the Administrator.

*See note on §60.503(a).*

**60.503(c)(7)**

To determine the volume (L) of gasoline dispensed during the performance test period at all loading racks whose vapor emissions are controlled by the processing system being tested, terminal records or readings from gasoline dispensing meters at each loading rack shall be used.

*See note on §60.503(a).*

**60.503(d)**

The owner or operator shall determine compliance with the standard in § 60.502(h) as follows:

*See note on §60.503(a).*

#### **60.503(d)(1)**

A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure with  $\pm 2.5$  mm of water precision, shall be calibrated and installed on the terminal's vapor collection system at a pressure tap located as close as possible to the connection with the gasoline tank truck.

*See note on §60.503(a).*

#### **60.503(d)(2)**

During the performance test, the pressure shall be recorded every 5 minutes while a gasoline truck is being loaded; the highest instantaneous pressure that occurs during each loading shall also be recorded. Every loading position must be tested at least once during the performance test.

*See note on §60.503(a).*

#### **60.503(e)**

The performance test requirements of paragraph (c) of this section do not apply to flares defined in § 60.501 and meeting the requirements in § 60.18(b) through (f). The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in § 60.18(b) through (f) and 60.503(a), (b), and (d).

***The loading rack at the terminal is controlled with a Vapor Combustion Unit (VCU), which is not a flare under the definition of §60.501 and meeting the requirements in §60.18 (b) through (f), so this provision is not used for compliance with NSPS XX.***

#### **60.503(f)**

The owner or operator shall use alternative test methods and procedures in accordance with the alternative test method provisions in § 60.8(b) for flares that do not meet the requirements in § 60.18(b).

***The loading rack at the terminal did not rely on alternative test methods and procedures to comply with NSPS XX in its initial performance test. This provision is marked not applicable because the terminal does not currently rely on it.***

[54 FR 6678, Feb. 14, 1989; 54 FR 21344, Feb. 14, 1989, as amended at 68 FR 70965, Dec. 19, 2003]

#### **§ 60.504 [Reserved]**

#### **§ 60.505 Reporting and recordkeeping.**

##### **60.505(a)**

The tank truck vapor tightness documentation required under § 60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection.

***The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. However, the terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2). Therefore, §60.505(a) is***

*marked not applicable because the terminal currently complies with §60.505(e)(2) (electronic records within a card lock-out system and terminal automation system) as an alternative to §60.505(a).*

**60.505(b)**

The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information:

*The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2). The provisions under §60.505(b) specify the types of information required for vapor tightness systems, and they apply to the terminal.*

**60.505(b)(1)**

Test title: Gasoline Delivery Tank Pressure Test—EPA Reference Method 27.

**60.505(b)(2)**

Tank owner and address.

**60.505(b)(3)**

Tank identification number.

**60.505(b)(4)**

Testing location.

**60.505(b)(5)**

Date of test.

**60.505(b)(6)**

Tester name and signature.

**60.505(b)(7)**

Witnessing inspector, if any: Name, signature, and affiliation.

**60.505(b)(8)**

Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs).

*The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2). The provisions under §60.505(b) specify the types of information required for vapor tightness systems, and they apply to the terminal.*

**60.505(c)**

A record of each monthly leak inspection required under § 60.502(j) shall be kept on file at the terminal for at least 2 years. Inspection records shall include, as a minimum, the following information:

***The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal keeps records of monthly leak inspections on file.***

**60.505(c)(1)**

Date of inspection.

**60.505(c)(2)**

Findings (may indicate no leaks discovered; or location, nature, and severity of each leak).

**60.505(c)(3)**

Leak determination method.

**60.505(c)(4)**

Corrective action (date each leak repaired; reasons for any repair interval in excess of 15 days).

**60.505(c)(5)**

Inspector name and signature.

**60.505(d)**

The terminal owner or operator shall keep documentation of all notifications required under § 60.502(e)(4) on file at the terminal for at least 2 years.

***The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal keeps records of monthly leak inspections on file.***

**60.505(e)**

As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in paragraphs (a), (c), and (d) of this section, an owner or operator may comply with the requirements in either paragraph (e)(1) or (2) of this section.

***The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2).***

**60.505(e)(1)**

An electronic copy of each record is instantly available at the terminal.

**60.505(e)(1)(i)**

The copy of each record in paragraph (e)(1) of this section is an exact duplicate image of the original paper record with certifying signatures.

### **60.505(e)(1)(ii)**

The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(1) of this section.

*The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2). §60.505(e) requires that either (e)(1) or (e)(2) be used. Therefore, (e)(1) and following items are marked not applicable because the terminal does not currently rely on them.*

### **60.505(e)(2)**

For facilities that utilize a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation is made available (e.g., via facsimile) for inspection by permitting authority representatives during the course of a site visit, or within a mutually agreeable time frame.

### **60.505(e)(2)(i)**

The copy of each record in paragraph (e)(2) of this section is an exact duplicate image of the original paper record with certifying signatures.

### **60.505(e)(2)(ii)**

The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(2) of this section.

*The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505. The terminal currently keeps electronic records of tank truck vapor tightness documentation in an automated card lock-out system under §60.505(e)(2).*

### **60.505(f)**

The owner or operator of an affected facility shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least 3 years.

*The loading rack at the terminal is subject to this subpart and is required to keep records under §60.505(f).*

[48 FR 37590, Aug. 18, 1983; 48 FR 56580, Dec. 22, 1983, as amended at 68 FR 70965, Dec. 19, 2003]

## **§ 60.506 Reconstruction.**

For purposes of this subpart:

### **60.506(a)**

The cost of the following frequently replaced components of the affected facility shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital costs that would be required to construct a comparable entirely new facility" under § 60.15: pump seals, loading arm gaskets and swivels, coupler gaskets, overfill sensor couplers and cables, flexible vapor hoses, and grounding cables and connectors.

## **60.506(b)**

Under § 60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in § 60.506(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following December 17, 1980. For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

***Because the loading rack at the terminal is currently subject to this NSPS, the loading rack does not need to maintain an evaluation of its status with regard to NSPS reconstruction provisions. Therefore, the terminal does not need to rely on §60.500(c), which is a limited exemption from reconstruction for certain projects undertaken before August 18, 1983. This section has been marked not applicable because the terminal's compliance demonstration method does not rely on or make reference to this section.***

**Appendix D – 40 CFR 63 Subpart BBBBBB**

Highlighted text indicated applicable sections.

***Bold and Italic*** text notes TLO comments.

## **SUBPART BBBBBB—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities**

### **Source Notes**

**Source:** 73 FR 1933, Jan. 10, 2008, unless otherwise noted.

### **What This Subpart Covers**

#### **§ 63.11080 What is the purpose of this subpart?**

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

***The gasoline loading rack, gasoline storage tanks, and equipment in gasoline service at the terminal constitute an affected source under this subpart.***

***40 CFR 63 Subpart BBBBBB defines a “bulk gasoline terminal” as “any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of 20,000 gallons per day or greater. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person.”***

***The terminal receives gasoline by pipeline. Its throughput is greater than 20,000 gallons per day. Therefore, the terminal meets the definition of “bulk gasoline terminal,” and as such, it is subject to NESHAP 6B.***

***As described below, an emission limit in this subpart applies to the Vapor Combustion Unit (VCU), while work practice standards apply to the gasoline loading rack, gasoline storage tanks, and equipment in gasoline service. Compliance demonstration methods corresponding to the applicable emission limit and work practice standards are also applicable to the terminal.***

#### **§ 63.11081 Am I subject to the requirements in this subpart?**

##### **63.11081(a)**

The affected source to which this subpart applies is each area source bulk gasoline terminal, pipeline breakout station, pipeline pumping station, and bulk gasoline plant identified in paragraphs (a)(1) through (4) of this section. You are subject to the requirements in this subpart if you own or operate one or more of the affected area sources identified in paragraphs (a)(1) through (4) of this section.

##### **63.11081(a)(1)**

A bulk gasoline terminal that is not subject to the control requirements of 40 CFR part 63, subpart R (§ §

63.422, 63.423, and 63.424) or 40 CFR part 63, subpart CC (§§ 63.646, 63.648, 63.649, and 63.650).

*The terminal is a bulk gasoline terminal, as defined in this subpart.*

*40 CFR 63 Subpart BBBBBB defines a "bulk gasoline terminal" as "any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of 20,000 gallons per day or greater. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person."*

*The terminal receives gasoline by pipeline. Its throughput is greater than 20,000 gallons per day. Therefore, the terminal meets the definition of "bulk gasoline terminal," and as such it is subject to NESHAP 6B.*

*Furthermore, the terminal is not subject to the control requirements of 40 CFR 63 Subpart R (NESHAP R). NESHAP R applies only to major sources of Hazardous Air Pollutants (HAP), as that term is defined in the Clean Air Act, §112(a): sources that emit or have the potential to emit 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAP, considering controls. The terminal was subject to a requirement to use the VCU prior to NESHAP R's first substantive compliance date. When the terminal's Potential to Emit (PTE) is calculated taking the VCU emission control into account, the terminal is not a major source of HAP. Therefore, NESHAP Subpart R does not apply to the terminal. Also, U. S. EPA's memorandum "Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act" (January 25, 2018) removed the requirement to evaluate NESHAP major source status according to the compliance date of the NESHAP. As of today, the terminal is not a major source of HAP (in consideration of required control devices) and is not subject to NESHAP R.*

*Therefore, as a bulk gasoline terminal not subject to control requirements of NESHAP R, the terminal is subject to NESHAP 6B (the subpart currently under review).*

#### **63.11081(a)(2)**

A pipeline breakout station that is not subject to the control requirements of 40 CFR part 63, subpart R (§§ 63.423 and 63.424).

*The terminal is not a pipeline breakout station as defined in this subpart. NESHAP 6B defines a pipeline breakout station as, "a facility along a pipeline containing storage vessels used to relieve surges or receive and store gasoline from the pipeline for re-injection and continued transportation by pipeline or to other facilities."*

*The terminal is a terminus of its receiving pipelines and its distribution pipelines.*

#### **63.11081(a)(3)**

A pipeline pumping station.

*The terminal is not a pipeline pumping station as defined in this subpart.*

*NESHAP 6B defines a pipeline pumping station as "a facility along a pipeline containing pumps to maintain the desired pressure and flow of product through the pipeline, and not containing gasoline storage tanks other than surge control tanks."*

*The terminal operates gasoline storage tanks for purposes other than surge control, so it is not a pipeline pumping station by the above definition.*

#### **63.11081(a)(4)**

A bulk gasoline plant.

*The terminal is not a bulk gasoline plant as defined in this subpart.*

*NESHAP 6B defines a bulk gasoline plant as "any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank, and subsequently loads the gasoline into gasoline cargo tanks for transport to gasoline dispensing facilities, and has a gasoline throughput of less than 20,000 gallons per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law, and discoverable by the Administrator and any other person."*

*The terminal is a gasoline storage and distribution facility that receives gasoline by pipeline. However, the terminal has a daily throughput of more than 20,000 gallons of gasoline. For this reason, it meets the definition of "bulk gasoline terminal" above, but it does not meet the definition of "bulk gasoline plant" here.*

#### **63.11081(b)**

If you are an owner or operator of affected sources, as defined in (a)(1) through (4) of this section, you are not required to meet the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you are still subject to the requirement to apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR part 71.3(a) and (b).

*The terminal is an affected source, a bulk gasoline terminal, as defined in (a)(1). The terminal is not required to obtain a Title V permit under 40 CFR parts 70 or 71 as a result of being an affected source. However, the terminal's PTE of Volatile Organic Compounds (VOC) is greater than 100 tpy, and for that reason, the terminal is subject to the requirement to obtain a Title V permit. The terminal has applied to renew its Tier I (Title V) operating permit with IDEQ.*

#### **63.11081(c)**

Gasoline storage tanks that are located at affected sources identified in paragraphs (a)(1) through (a)(4) of this section, and that are used only for dispensing gasoline in a manner consistent with tanks located at a gasoline dispensing facility as defined in § 63.11132, are not subject to any of the requirements in this subpart. These tanks must comply with subpart CCCCC of this part.

*The terminal does operate gasoline storage tanks, but these tanks do not operate in the manner of a gasoline dispensing facility. The gasoline storage tanks at the terminal are used for loading cargo tank trucks in a manner consistent with NESHAP 6B (the subpart under review here).*

#### **63.11081(d)**

The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

*The terminal does not load aviation gasoline into airport storage tanks.*

### 63.11081(e)

The loading of gasoline into marine tank vessels at bulk facilities is not subject to this subpart.

***The terminal does not load gasoline into marine tank vessels.***

### 63.11081(f)

If your affected source's throughput ever exceeds an applicable throughput threshold in the definition of "bulk gasoline terminal" or in item 1 in Table 2 to this subpart, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

***The terminal has operated above the 20,000 gal/day minimum throughput threshold for exemption from the definition of "bulk gasoline terminal." Therefore, the terminal is subject to this subpart. Furthermore, the terminal has operated its gasoline loading rack above the 250,000 gal/day throughput threshold in Table 2, item 1 of this subpart. Therefore, the terminal's gasoline loading rack is subject to Table 2, item 1.***

### 63.11081(g)

For the purpose of determining gasoline throughput, as used in the definition of bulk gasoline plant and bulk gasoline terminal, the 20,000 gallons per day threshold throughput is the maximum calculated design throughput for any day, and is not an average. An enforceable State, local, or Tribal permit limitation on throughput, established prior to the applicable compliance date, may be used in lieu of the 20,000 gallons per day design capacity throughput threshold to determine whether the facility is a bulk gasoline plant or a bulk gasoline terminal.

***The terminal has operated above the 20,000 gal/day minimum throughput threshold for exemption from the definition of "bulk gasoline terminal." Therefore, the terminal is subject to this subpart. The terminal is not required to evaluate its status with regard to the minimum throughput threshold.***

### 63.11081(h)

Storage tanks that are used to load gasoline into a cargo tank for the on-site redistribution of gasoline to another storage tank are subject to this subpart.

***The terminal does not load gasoline into cargo tanks for on-site redistribution to another storage tank. This section is marked not applicable because the activity does not take place at the terminal.***

### 63.11081(i)

For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11093. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions; noncompliance with this rule is not excused if it is later determined that your determination was in error, and,

as a result, you are violating this subpart. Compliance with this rule is your responsibility, and the Notification of Compliance Status does not alter or affect that responsibility.

*The terminal (the affected source) is subject to two other Federal rules with requirements that apply to activities also regulated under NESHAP 6B herein. These rules are 40 CFR 60 Subpart Kb (NSPS Kb) and 40 CFR 60 Subpart XX (NSPS XX), applying to certain storage tanks (Tank 202, Tank 203, and Tank 204) and to the gasoline loading rack VCU, respectively.*

*Applicability of requirements in these two regulations is described on their Forms FRA.*

*The above paragraph of NESHAP 6B, §63.11081(i), applies because in certain instances, the terminal elects to comply with more stringent provisions of NSPS XX. The full applicability of NSPS XX is specified in the appropriate Form FRA. This present description of why §63.11081(i) applies to the terminal specifies, for reference, which provisions of NSPS XX are more stringent than those of NESHAP 6B and vice versa. Because the terminal complies with these standards, §63.11081(i) applies to the terminal.*

- *§60.502(b), VCU emission standard of 35 mg/L total organic compounds (TOC), as surrogate for §63.11088(a) and NESHAP 6B Table 2 Item 1b, 80 mg/L VOC.*

*With regard to NSPS Kb, the terminal does not rely on this paragraph (§63.11081(i)) to handle regulatory overlap, because NESHAP 6B below (at §63.11087(f)) provides NSPS Kb compliance as a compliance path for NESHAP 6B. Therefore, tanks at the terminal that are subject to both subparts use NSPS Kb as the compliance demonstration method for both. No additional analysis of regulatory overlap is required, because NESHAP 6B compliance demonstration methods do not directly apply to the NSPS Kb tanks.*

### **63.11081(j)**

For new or reconstructed affected sources, as specified in § 63.11082(b) and (c), recordkeeping to document applicable throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11082(d), recordkeeping to document applicable throughput must begin on January 10, 2008. Records required under this paragraph shall be kept for a period of 5 years.

*This section is marked not applicable, because, as noted under §63.11081(f), the terminal has already exceeded applicable throughput thresholds for determining the applicability of this subpart to the terminal.*

[Amended at 76 FR page 4176, Jan. 24, 2011]

## **§ 63.11082 What parts of my affected source does this subpart cover?**

### **63.11082(a)**

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 Tables 1 through 3 to this subpart.

*The following sources at the terminal are subject to this subpart: gasoline storage tanks including Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208, the gasoline loading rack and Vapor Combustion Unit (VCU), vapor-collection equipped gasoline cargo tanks, and equipment components in vapor or liquid gasoline service.*

*A tank-by-tank evaluation of NESHAP 6B applicability follows under §63.11087(a). The terminal's*

**gasoline storage tanks are subject to this subpart. Tanks storing distillate fuels, jet kerosene, denatured ethanol, wastewater, and fuel additives are not subject to NESHAP 6B because these tanks do not store gasoline. Gasoline, as defined in NESHAP 6B, is "any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines."**

**The terminal's product loading rack is subject because it loads gasoline. The loading rack and tank farm contain equipment in gasoline service. The gasoline cargo tanks on the tank trucks loaded by the loading rack are subject to the vapor tightness requirements of NESHAP 6B.**

**For reference, the terminal's transmix loading operation is not subject to NESHAP 6B because the transmix loaded in the operation is not gasoline. Transmix produced at the terminal contains a blend of gasoline and distillate oils and is unsuitable for engine fuel.**

#### **63.11082(b)**

An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11081 at the time you commenced operation.

**The terminal was constructed prior to November 9, 2006, and does not meet the definition of "reconstructed" as set forth in 40 CFR 63.2. Therefore, the terminal is an existing source according to the provisions of this subpart.**

#### **63.11082(c)**

An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

**The terminal was constructed prior to November 9, 2006, and does not meet the definition of "reconstructed" as set forth in 40 CFR 63.2. Therefore, the terminal is an existing source according to the provisions of this subpart.**

#### **63.11082(d)**

An affected source is an existing affected source if it is not new or reconstructed.

**The terminal was constructed prior to November 9, 2006, and does not meet the definition of "reconstructed" as set forth in 40 CFR 63.2. Therefore, the terminal is an existing source according to the provisions of this subpart.**

### **§ 63.11083 When do I have to comply with this subpart?**

#### **63.11083(a)**

If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

**The terminal is an existing source, so this section is not applicable.**

#### **63.11083(a)(1)**

If you start up your affected source before January 10, 2008, you must comply with the standards in this

subpart no later than January 10, 2008.

*The terminal is an existing source, so this section is not applicable.*

### **63.11083(a)(2)**

If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

*The terminal is an existing source, so this section is not applicable.*

### **63.11083(b)**

If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

*The terminal is an existing source and complied with the standards in this subpart prior to January 10, 2011.*

### **63.11083(c)**

If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the daily throughput, as specified in option 1 of Table 2 to this subpart, you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

*The terminal is an existing source, and complied with the standards in this subpart prior to January 10, 2011. As noted under §63.11081(f), the terminal has already exceeded applicable throughput thresholds for determining the applicability of this subpart to the terminal.*

[Amended at 76 FR page 4177, Jan. 24, 2011]

## **Emission Limitations and Management Practices**

### **§ 63.11085 What are my general duties to minimize emissions?**

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

#### **63.11085(a)**

You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

#### **63.11085(b)**

You must keep applicable records and submit reports as specified in § 63.11094(g) and § 63.11095(d).

*General duties of this subpart apply to the affected source at the terminal. The scope of the affected source is specified in §63.11082(a): gasoline storage tanks including Tanks 12, 13, 164,*

**165, 166, 200, 202, 203, 204, and 208, the gasoline loading rack and Vapor Combustion Unit (VCU), vapor-collection equipped gasoline cargo tanks, and equipment components in vapor or liquid gasoline service.**

***The records and reports in §§ 63.11094(g) and 63.11095(d) apply to malfunction events at any of the activities in the affected source.***

[76 FR page 4177, Jan. 24, 2011]

### **§ 63.11086 What requirements must I meet if my facility is a bulk gasoline plant?**

Each owner or operator of an affected bulk gasoline plant, as defined in § 63.11100, must comply with the requirements of paragraphs (a) through (i) of this section.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

#### **63.11086(a)**

Except as specified in paragraph (b) of this section, you must only load gasoline into storage tanks and cargo tanks at your facility by utilizing submerged filling, as defined in § 63.11100, and as specified in paragraphs (a)(1), (a)(2), or (a)(3) of this section. The applicable distances in paragraphs (a)(1) and (2) of this section shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

#### **63.11086(a)(1)**

Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

#### **63.11086(a)(2)**

Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

#### **63.11086(a)(3)**

Submerged fill pipes not meeting the specifications of paragraphs (a)(1) or (a)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the gasoline storage tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

**63.11086(b)**

Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the control requirements in paragraph (a) of this section, but must comply only with the requirements in paragraph (d) of this section.

*The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.*

**63.11086(c)**

You must perform a monthly leak inspection of all equipment in gasoline service according to the requirements specified in § 63.11089(a) through (d).

*The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.*

**63.11086(d)**

You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

*The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.*

**63.11086(d)(1)**

Minimize gasoline spills;

**63.11086(d)(2)**

Clean up spills as expeditiously as practicable;

**63.11086(d)(3)**

Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

**63.11086(d)(4)**

Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

**63.11086(e)**

You must submit an Initial Notification that you are subject to this subpart by May 9, 2008 unless you meet the requirements in paragraph (g) of this section. The Initial Notification must contain the information specified in paragraphs (e)(1) through (4) of this section. The notification must be submitted to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13.

*The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.*

**63.11086(e)(1)**

The name and address of the owner and the operator.

**63.11086(e)(2)**

The address (i.e., physical location) of the bulk plant.

**63.11086(e)(3)**

A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a), (b), (c), and (d) of this section that apply to you.

**63.11086(e)(4)**

A brief description of the bulk plant, including the number of storage tanks in gasoline service, the capacity of each storage tank in gasoline service, and the average monthly gasoline throughput at the affected source.

**63.11086(f)**

You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, by the compliance date specified in § 63.11083 unless you meet the requirements in paragraph (g) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of this subpart. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (e) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (e) of this section.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

**63.11086(g)**

If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11086(a), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (e) or paragraph (f) of this section.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

**63.11086(h)**

You must comply with the requirements of this subpart by the applicable dates specified in § 63.11083.

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

**63.11086(i)**

You must keep applicable records and submit reports as specified in § 63.11094(d) and (e) and § 63.11095(c).

***The terminal is not a bulk gasoline plant as defined in this subpart. The terminal has a daily throughput of more than 20,000 gallons of gasoline.***

[Amended at 76 FR page 4177, Jan. 24, 2011]

**§ 63.11087 What requirements must I meet for gasoline storage tanks if my facility is a bulk gasoline terminal, pipeline breakout station, or pipeline pumping station?**

**63.11087(a)**

You must meet each emission limit and management practice in Table 1 to this subpart that applies to your gasoline storage tank.

*The terminal stores gasoline in the following storage tanks: Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208. These tanks are subject to the provisions of this section. Tanks storing other materials at the site do not meet the definition of "gasoline," either because their Reid vapor pressure (RVP) is lower than 27.6 kPa (4.0 psia) or because they are not used as fuel for internal combustion engines. Tanks storing diesel, jet kerosene, and ethanol are not "gasoline" because their RVP are below the threshold. Tanks storing transmix, wastewater, and fuel additives are not storing gasoline because those liquids are not used as fuel for internal combustion engines.*

**63.11087(b)**

You must comply with the requirements of this subpart by the applicable dates specified in § 63.11083, except that storage vessels equipped with floating roofs and not meeting the requirements of paragraph (a) of this section must be in compliance at the first degassing and cleaning activity after January 10, 2011 or by January 10, 2018, whichever is first.

*The terminal's gasoline storage tanks, including Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208, all complied with this subpart prior to the applicable date of January 10, 2011.*

*As noted below at §63.11087(f), Tanks 202, 203, and 204 comply with NSPS Kb and are deemed in compliance with NESHAP 6B. For these tanks, no emission standards or work practice requirements apply under NESHAP 6B. For reference, the requirements applicable under NSPS Kb are listed on the Form FRA for NSPS Kb.*

*The work practice requirements applying to the gasoline storage tanks (other than those subject to NSPS Kb) is item 2(c) of Table 1 of NESHAP 6B, because the tanks are equipped with external floating roofs, and the terminal does not currently demonstrate compliance according to item 2(d) of the table.*

**63.11087(c)**

You must comply with the applicable testing and monitoring requirements specified in § 63.11092(e).

*Those gasoline storage tanks at the terminal that are not subject to NSPS Kb are required to comply with applicable testing and monitoring requirements: Tanks 12, 13, 164, 165, 166, 200, and 208.*

*As noted below at §63.11087(f), Tanks 202, 203, and 204 comply with NSPS Kb and are deemed in compliance with NESHAP 6B; therefore, no testing or monitoring requirements apply to those tanks under NESHAP 6B. For reference, the requirements applicable under NSPS Kb are listed on the Form FRA for NSPS Kb.*

*The testing and monitoring requirement applying to the gasoline storage tanks (other than those subject to NSPS Kb) is §63.11092(e)(2), because the tanks are equipped with external floating roofs. They comply with item 2(c) of Table 1 of NESHAP 6B.*

#### **63.11087(d)**

You must submit the applicable notifications as required under § 63.11093.

*Those gasoline storage tanks at the terminal that are not subject to NSPS Kb are required to comply with applicable notifications: Tanks 12, 13, 164, 165, 166, 200, and 208.*

*The terminal's gasoline storage tanks are required to comply with certain notification requirements in §63.11093 that apply to gasoline storage tanks. The gasoline storage tanks, including those that comply with NESHAP 6B because they comply with NSPS Kb, were subject to the requirement to file a Notification of Compliance Status (NOCS) under §63.11093(b). The terminal is currently subject to the requirement to submit notifications under NESHAP general provisions as applicable under §63.11093(d).*

*As noted below at §63.11087(f), Tanks 202, 203, and 204 comply with 40 CFR 60 Subpart Kb and are deemed in compliance with NESHAP 6B. Therefore, no notification requirements beyond the NESHAP 6B NOCS apply to those tanks under NESHAP 6B. For reference, the requirements applicable under NSPS Kb are listed on the Form FRA for NSPS Kb.*

#### **63.11087(e)**

You must keep records and submit reports as specified in §§ 63.11094 and 63.11095.

*Those gasoline storage tanks at the terminal that are not subject to NSPS Kb are required to comply with applicable recordkeeping and reporting requirements: Tanks 12, 13, 164, 165, 166, 200, and 208.*

*As noted below at §63.11087(f), Tanks 202, 203, and 204 comply with NSPS Kb and are deemed in compliance with NESHAP 6B; therefore, no recordkeeping or reporting requirements apply under NESHAP 6B. For reference, the requirements applicable under NSPS Kb are listed on the Form FRA for NSPS Kb.*

*The terminal's gasoline storage tanks are required to comply with certain recordkeeping and reporting requirements in §63.11094 that apply to gasoline storage tanks. The gasoline storage tanks are subject to the requirement to keep records of inspection results under §63.11094(a), because they comply with item 2(c) of Table 1 of NESHAP 6B.*

*Details about gasoline storage tank compliance must be included on the semiannual compliance report according to §63.11095(a)(1). If a malfunction occurred at a gasoline storage tank, a malfunction report must be filed according to §63.11095(d).*

#### **63.11087(f)**

If your gasoline storage tank is subject to, and complies with, the control requirements of 40 CFR part 60, subpart Kb of this chapter, your storage tank will be deemed in compliance with this section. You must

report this determination in the Notification of Compliance Status report under § 63.11093(b).

***The terminal operates three gasoline storage tanks that are subject to and comply with NSPS Kb: Tanks 202, 203, and 204. These tanks are deemed in compliance with this section of NESHAP 6B (viz., §63.11087). No further work practice, monitoring, recordkeeping, or reporting requirements under this section apply to Tanks 202, 203, and 204. They are subject to the above notification requirement, viz., to be included in the NOCS.***

**§ 63.11088 What requirements must I meet for gasoline loading racks if my facility is a bulk gasoline terminal, pipeline breakout station, or pipeline pumping station?**

**63.11088(a)**

You must meet each emission limit and management practice in Table 2 to this subpart that applies to you.

***The following emission limits and management practices from Table 2 apply to the terminal's product loading rack:***

- *Item 1a*
- *Item 1c*
- *Item 1d*

***Item 1b, the 80 mg/L TOC emission standard from NESHAP 6B, is superseded by the NSPS XX emission standard of 35 mg/L TOC at §60.502(b). Because of the overlap provision specified at §63.11081(i), the NESHAP 6B emission limit does not apply to the terminal.***

***Items 2a and 2b of Table 2 do not apply to the terminal's product loading rack because the terminal's product loading rack has a gasoline throughput greater than 250,000 gal/day (365-day average).***

**63.11088(b)**

As an alternative for railcar cargo tanks to the requirements specified in Table 2 to this subpart, you may comply with the requirements specified in § 63.422(e).

***The terminal does not load gasoline to railcar cargo tanks. Therefore no railcar cargo tank requirements apply to the terminal.***

**63.11088(c)**

You must comply with the requirements of this subpart by the applicable dates specified in § 63.11083.

***The terminal was constructed prior to November 9, 2006, and does not meet the definition of "reconstructed" as set forth in 40 CFR 63.2. Therefore, the terminal is an existing source according to the provisions of NESHAP 6B.***

***In accordance with §63.11083(b), the terminal's product loading rack is currently in compliance with this subpart and demonstrated compliance prior to January 10, 2011.***

**63.11088(d)**

You must comply with the applicable testing and monitoring requirements specified in § 63.11092.

*The terminal's product loading rack is required to comply with certain testing and monitoring requirements in §63.11092 that apply to the product loading rack. For instance, the product loading rack complies with requirements under §63.11092(b)(5). Not all requirements of §63.11092 apply. Further detail on applicable requirements in this section is provided below.*

#### **63.11088(e)**

You must submit the applicable notifications as required under § 63.11093.

*The terminal's product loading rack is required to comply with certain notification requirements in §63.11093 that apply to the product loading rack. The product loading rack was subject to the requirement to file a Notification of Compliance Status (NOCS) under §63.11093(b). The product loading rack is currently subject to the requirement to submit notifications under NESHAP general provisions as applicable under §63.11093(d).*

#### **63.11088(f)**

You must keep records and submit reports as specified in §§ 63.11094 and 63.11095.

*The terminal's product loading rack is required to comply with certain recordkeeping and reporting requirements in §63.11094 that apply to the product loading rack. The product loading rack is subject to the requirement to keep records of gasoline cargo tank vapor tightness test results under §63.11094(c)(2). The product loading rack is also required to file semiannual compliance reports (§63.11095(a)(2)), excess emission reports (§63.11095(b), paragraphs (1) through (3)), and malfunction reports (§63.11095(d)).*

### **§ 63.11089 What requirements must I meet for equipment leak inspections if my facility is a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station?**

#### **63.11089(a)**

Each owner or operator of a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station subject to the provisions of this subpart shall perform a monthly leak inspection of all equipment in gasoline service, as defined in § 63.11100. For this inspection, detection methods incorporating sight, sound, and smell are acceptable.

*The terminal's product loading rack and tank farm contain equipment in gasoline liquid service and gasoline vapor service. The terminal's equipment in liquid and vapor gasoline service is currently in compliance with this subpart. This paragraph requires the terminal to conduct monthly leak inspections of the equipment.*

#### **63.11089(b)**

A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

***The terminal's product loading rack and tank farm contain equipment in gasoline liquid service and gasoline vapor service. The terminal is required to maintain a log book documenting the location of equipment in gasoline service at the facility.***

**63.11089(c)**

Each detection of a liquid or vapor leak shall be recorded in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in paragraph (d) of this section.

***The terminal's product loading rack and tank farm contain equipment in gasoline liquid service and gasoline vapor service. The terminal is required to record each detection of a liquid or vapor leak in the log book. The terminal is also required to repair leaks within the 5-day and 15-day timelines of this section.***

**63.11089(d)**

Delay of repair of leaking equipment will be allowed if the repair is not feasible within 15 days. The owner or operator shall provide in the semiannual report specified in § 63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed.

***The terminal's product loading rack and tank farm contain equipment in gasoline liquid service and gasoline vapor service. The terminal is required to follow this section's requirements for documenting and reporting delays of repair.***

**63.11089(e)**

You must comply with the requirements of this subpart by the applicable dates specified in § 63.11083.

***The terminal's product loading rack and tank farm contain equipment in gasoline liquid service and gasoline vapor service.***

***The terminal was constructed prior to November 9, 2006, and does not meet the definition of "reconstructed" as set forth in 40 CFR 63.2. Therefore, the terminal is an existing source according to the provisions of NESHAP 6B.***

***In accordance with §63.11083(b), the terminal's equipment in gasoline service is currently in compliance with this subpart and demonstrated compliance prior to January 10, 2011.***

**63.11089(f)**

You must submit the applicable notifications as required under § 63.11093.

***The terminal's equipment in gasoline service was subject to the requirement to file a Notification of Compliance Status (NOCS) under §63.11093(b).***

**63.11089(g)**

You must keep records and submit reports as specified in § § 63.11094 and 63.11095.

*The terminal's equipment in gasoline service is subject to recordkeeping and reporting requirements in this subpart. Requirements include §63.11094 paragraph (d), to keep a record of equipment types, ID numbers, and locations, paragraph (e) to keep a log book of equipment leaks detected, and paragraph (g) to record malfunctions. Requirements also include §63.11095, paragraph (a)(3) for equipment leak inspections in the semiannual compliance report, paragraph (b)(5) for equipment leak repairs meeting the definition of "excess emission events" in the excess emission report, and paragraph (d) if equipment in gasoline service malfunctions.*

## **Testing and Monitoring Requirements**

### **§ 63.11092 What testing and monitoring requirements must I meet?**

#### **63.11092(a)**

Each owner or operator of a bulk gasoline terminal subject to the emission standard in item 1(b) of Table 2 to this subpart must comply with the requirements in paragraphs (a) through (d) of this section.

*The emission standard in item 1(b) of Table 2 of this subpart is an 80 mg/L TOC emission control requirement for gasoline loading racks.*

*The terminal's product loading rack, with its VCU emission control system, is the only activity at the terminal that could be subject to the emission standard in item 1(b) of Table 2.*

*As described at §63.11081(i) above, the 80 mg/L standard in item 1(b) of Table 2 does not apply to the VCU. The reason is that while the product loading rack meets the applicability criteria in NESHAP 6B, the overlap provisions at §63.11081(i) specify that another more stringent emission standard may be complied with in lieu of NESHAP 6B standards. The VCU is subject to an emission standard in NSPS XX of 35 mg/L TOC. Therefore, the VCU complies with this emission standard in lieu of 80 mg/L.*

*Nevertheless, the terminal uses NESHAP 6B's compliance demonstration provisions to demonstrate compliance with the NSPS XX limit. That is because the NESHAP 6B provisions constitute a more stringent compliance demonstration method than the method in NSPS XX, and the NESHAP 6B overlap provisions specify that the most stringent requirements shall apply.*

*For this reason, the current paragraph §63.11092(a) applies to the terminal despite the fact that the specific item 1(b) does not.*

#### **63.11092(a)(1)**

Conduct a performance test on the vapor processing and collection systems according to either paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

#### **63.11092(a)(1)(i)**

Use the test methods and procedures in § 60.503 of this chapter, except a reading of 500 parts per million shall be used to determine the level of leaks to be repaired under § 60.503(b) of this chapter.

#### **63.11092(a)(1)(ii)**

Use alternative test methods and procedures in accordance with the alternative test method requirements

in § 63.7(f).

***The terminal, being a source that must comply with an emission limit for the product loading rack, must comply with one of the paragraphs in (a)(1) through (4).***

***Of these paragraphs, the terminal has elected to comply with paragraph (a)(2) below, viz., complying with the requirement of paragraph (a) via compliance with an enforceable state permit limit.***

***For this reason, according to the language of paragraph (a) above, the terminal is exempt from paragraph (a)(1).***

#### **63.11092(a)(2)**

If you are operating your gasoline loading rack in compliance with an enforceable State, local, or tribal rule or permit that requires your loading rack to meet an emission limit of 80 milligrams (mg), or less, per liter of gasoline loaded (mg/l), you may submit a statement by a responsible official of your facility certifying the compliance status of your loading rack in lieu of the test required under paragraph (a)(1) of this section.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must comply with one of the paragraphs in (a)(1) through (4).***

***Of these paragraphs, the terminal has elected to comply with paragraph (a)(2), viz., complying with the requirement of paragraph (a) via compliance with an enforceable state permit limit.***

***On the compliance date of this subpart, January 10, 2011 for existing sources, the terminal was operating its gasoline loading rack in compliance with an enforceable emission limit of 35 mg of total organic compounds (TOC) per liter of gasoline loaded. This limit originates with 40 CFR 60.502 (NSPS XX) and was located in an enforceable State permit in Condition 3.2 of the terminal's current Tier I permit issued in 2008.***

#### **63.11092(a)(3)**

If you have conducted performance testing on the vapor processing and collection systems within 5 years prior to January 10, 2008, and the test is for the affected facility and is representative of current or anticipated operating processes and conditions, you may submit the results of such testing in lieu of the test required under paragraph (a)(1) of this section, provided the testing was conducted using the test methods and procedures in § 60.503 of this chapter. Should the Administrator deem the prior test data unacceptable, the facility is still required to meet the requirement to conduct an initial performance test within 180 days of the compliance date specified in § 63.11083; thus, previous test reports should be submitted as soon as possible after January 10, 2008.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must comply with one of the paragraphs in (a)(1) through (4).***

***Of these paragraphs, the terminal has elected to comply with paragraph (a)(2) above, viz., complying with the requirement of paragraph (a) via compliance with an enforceable state permit limit.***

***For this reason, according to the language of paragraph (a) above, the terminal is exempt from paragraph (a)(3).***

#### **63.11092(a)(4)**

The performance test requirements of § 63.11092(a) do not apply to flares defined in § 63.11100 and

meeting the flare requirements in § 63.11(b). The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in § 63.11(b) and 40 CFR 60.503(a), (b), and (d).

***The terminal, being a source that must comply with an emission limit for the product loading rack, must comply with one of the paragraphs in (a)(1) through (4).***

***Of these paragraphs, the terminal has elected to comply with paragraph (a)(2) above, viz., complying with the requirement of paragraph (a) via compliance with an enforceable state permit limit.***

***The terminal has not elected to comply with paragraph (a)(4) because the terminal complies with its emission limit using a VCU, which is not a flare, as defined at §63.11100, meeting the requirements of §63.11(b).***

### **63.11092(b)**

Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the vapor processor systems, as specified in paragraphs (b)(1) through (5) of this section. For each facility conducting a performance test under paragraph (a)(1) of this section, and for each facility utilizing the provisions of paragraphs (a)(2) or (a)(3) of this section, the CMS must be installed by January 10, 2011.

***As described in §63.11092 paragraph (a) above, the terminal is required to use the NESHAP 6B compliance demonstration method to demonstrate compliance with a limit of 35 mg/L TOC. Therefore, the terminal complies with the requirement of paragraph (b) to conduct continuous monitoring of the VCU.***

***The terminal uses the provision of paragraph (a)(2) above. The terminal is not required to perform an initial performance test under paragraph (a)(1). The terminal is instead required to install the CMS in this paragraph prior to January 10, 2011. The terminal installed the CMS prior to that date.***

### **63.11092(b)(1)**

For each performance test conducted under paragraph (a)(1) of this section, the owner or operator shall determine a monitored operating parameter value for the vapor processing system using the procedures specified in paragraphs (b)(1)(i) through (iv) of this section. During the performance test, continuously record the operating parameter as specified under paragraphs (b)(1)(i) through (iv) of this section.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***However, as described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***Therefore, the specifically prescribed requirements that follow for various types of control equipment in paragraph (b)(1) are not marked applicable.***

### **63.11092(b)(1)(i)**

Where a carbon adsorption system is used, the owner or operator shall monitor the operation of the system as specified in paragraphs (b)(1)(i)(A) or (B) of this section.

### **63.11092(b)(1)(i)(A)**

A continuous emissions monitoring system (CEMS) capable of measuring organic compound concentration shall be installed in the exhaust air stream.

### **63.11092(b)(1)(i)(B)**

As an alternative to paragraph (b)(1)(i)(A) of this section, you may choose to meet the requirements listed in paragraph (b)(1)(i)(B)(1) and (2) of this section.

### **63.11092(b)(1)(i)(B)(1)**

Carbon adsorption devices shall be monitored as specified in paragraphs (b)(1)(i)(B)(1)(i), (ii), and (iii) of this section.

### **63.11092(b)(1)(i)(B)(1)(i)**

Vacuum level shall be monitored using a pressure transmitter installed in the vacuum pump suction line, with the measurements displayed on a gauge that can be visually observed. Each carbon bed shall be observed during one complete regeneration cycle on each day of operation of the loading rack to determine the maximum vacuum level achieved.

### **63.11092(b)(1)(i)(B)(1)(ii)**

Conduct annual testing of the carbon activity for the carbon in each carbon bed. Carbon activity shall be tested in accordance with the butane working capacity test of the American Society for Testing and Materials (ASTM) Method D 5228-92 (incorporated by reference, see § 63.14), or by another suitable procedure as recommended by the manufacturer.

### **63.11092(b)(1)(i)(B)(1)(iii)**

Conduct monthly measurements of the carbon bed outlet volatile organic compounds (VOC) concentration over the last 5 minutes of an adsorption cycle for each carbon bed, documenting the highest measured VOC concentration. Measurements shall be made using a portable analyzer, or a permanently mounted analyzer, in accordance with 40 CFR part 60, Appendix A-7, EPA Method 21 for open-ended lines.

### **63.11092(b)(1)(i)(B)(2)**

Develop and submit to the Administrator a monitoring and inspection plan that describes the owner or operator's approach for meeting the requirements in paragraphs (b)(1)(i)(B)(2)(i) through (v) of this section.

### **63.11092(b)(1)(i)(B)(2)(i)**

The lowest maximum required vacuum level and duration needed to assure regeneration of the carbon beds shall be determined by an engineering analysis or from the manufacturer's recommendation and shall be documented in the monitoring and inspection plan.

**63.11092(b)(1)(i)(B)(2)(ii)**

The owner or operator shall verify, during each day of operation of the loading rack, the proper valve sequencing, cycle time, gasoline flow, purge air flow, and operating temperatures. Verification shall be through visual observation, or through an automated alarm or shutdown system that monitors system operation. A manual or electronic record of the start and end of a shutdown event may be used.

**63.11092(b)(1)(i)(B)(2)(iii)**

The owner or operator shall perform semi-annual preventive maintenance inspections of the carbon adsorption system, including the automated alarm or shutdown system for those units so equipped, according to the recommendations of the manufacturer of the system.

**63.11092(b)(1)(i)(B)(2)(iv)**

The monitoring plan developed under paragraph (2) of this section shall specify conditions that would be considered malfunctions of the carbon adsorption system during the inspections or automated monitoring performed under paragraphs (b)(1)(i)(B)(2)(i) through (iii) of this section, describe specific corrective actions that will be taken to correct any malfunction, and define what the owner or operator would consider to be a timely repair for each potential malfunction.

**63.11092(b)(1)(i)(B)(2)(v)**

The owner or operator shall document the maximum vacuum level observed on each carbon bed from each daily inspection and the maximum VOC concentration observed from each carbon bed on each monthly inspection as well as any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

**63.11092(b)(1)(ii)**

Where a refrigeration condenser system is used, a continuous parameter monitoring system (CPMS) capable of measuring temperature shall be installed immediately downstream from the outlet to the condenser section. Alternatively, a CEMS capable of measuring organic compound concentration may be installed in the exhaust air stream.

**63.11092(b)(1)(iii)**

Where a thermal oxidation system other than a flare is used, the owner or operator shall monitor the operation of the system as specified in paragraphs (b)(1)(iii)(A) or (B) of this section.

**63.11092(b)(1)(iii)(A)**

A CPMS capable of measuring temperature shall be installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs.

**63.11092(b)(1)(iii)(B)**

As an alternative to paragraph (b)(1)(iii)(A) of this section, you may choose to meet the requirements listed in paragraphs (b)(1)(iii)(B)(1) and (2) of this section.

**63.11092(b)(1)(iii)(B)(1)**

The presence of a thermal oxidation system pilot flame shall be monitored using a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, installed in proximity of the pilot light, to indicate the presence of a flame. The heat-sensing device shall send a positive parameter value to indicate that the pilot flame is on, or a negative parameter value to indicate that the pilot flame is off.

**63.11092(b)(1)(iii)(B)(2)**

Develop and submit to the Administrator a monitoring and inspection plan that describes the owner or operator's approach for meeting the requirements in paragraphs (b)(1)(iii)(B)(2)(i) through (v) of this section.

**63.11092(b)(1)(iii)(B)(2)(i)**

The thermal oxidation system shall be equipped to automatically prevent gasoline loading operations from beginning at any time that the pilot flame is absent.

**63.11092(b)(1)(iii)(B)(2)(ii)**

The owner or operator shall verify, during each day of operation of the loading rack, the proper operation of the assist-air blower and the vapor line valve. Verification shall be through visual observation, or through an automated alarm or shutdown system that monitors system operation. A manual or electronic record of the start and end of a shutdown event may be used.

**63.11092(b)(1)(iii)(B)(2)(iii)**

The owner or operator shall perform semi-annual preventive maintenance inspections of the thermal oxidation system, including the automated alarm or shutdown system for those units so equipped, according to the recommendations of the manufacturer of the system.

**63.11092(b)(1)(iii)(B)(2)(iv)**

The monitoring plan developed under paragraph (2) of this section shall specify conditions that would be considered malfunctions of the thermal oxidation system during the inspections or automated monitoring performed under paragraphs (b)(1)(iii)(B)(2)(ii) and (iii) of this section, describe specific corrective actions that will be taken to correct any malfunction, and define what the owner or operator would consider to be a timely repair for each potential malfunction.

**63.11092(b)(1)(iii)(B)(2)(v)**

The owner or operator shall document any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

**63.11092(b)(1)(iv)**

Monitoring an alternative operating parameter or a parameter of a vapor processing system other than those listed in paragraphs (b)(1)(i) through (iii) of this section will be allowed upon demonstrating to the Administrator's satisfaction that the alternative parameter demonstrates continuous compliance with the emission standard in § 63.11088(a).

***Under paragraph (b)(1) above is a description of why the entirety of paragraph (b)(1) does not apply to the terminal.***

#### **63.11092(b)(2)**

Where a flare meeting the requirements in § 63.11(b) is used, a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, must be installed in proximity to the pilot light to indicate the presence of a flame.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***The terminal does not demonstrate continuous compliance with a flare as defined at §63.11100 and meeting the requirements of §63.11(b). Therefore, paragraph (b)(2) does not apply.***

#### **63.11092(b)(3)**

Determine an operating parameter value based on the parameter data monitored during the performance test, supplemented by engineering assessments and the manufacturer's recommendations.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***However, as described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***Therefore, the terminal is not required to determine an operating parameter value in paragraph (b)(3) for the inapplicable performance test in paragraph (b)(1). The terminal is required under paragraph (b)(5) below to determine a parameter value based on engineering assessment and manufacturer's recommendation.***

#### **63.11092(b)(4)**

Provide for the Administrator's approval the rationale for the selected operating parameter value, monitoring frequency, and averaging time, including data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the emission standard in § 63.11088(a).

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***For this reason, paragraph (b)(5) below applies. The terminal is required to determine a monitored operating parameter value either from its current enforceable operating permit ((b)(5)(i)) or from an***

**engineering assessment and manufacturer's recommendation with administrator approval ((b)(5)(ii)).**

**The terminal does not have a monitored operating parameter value specified in the conditions of its current Tier I permit. Therefore, the terminal has elected to submit an engineering assessment and manufacturer's recommendation with administrator approval under paragraph (b)(5)(ii). The contents of this assessment, along with the parameter value, are stated under paragraph (b)(5)(ii) below. In particular, paragraph (b)(5)(ii) requires that the terminal "submit the information specified in paragraph (b)(4) of this section for approval by the Administrator."**

**For this reason, paragraph (b)(4) applies to the terminal, as called by paragraph (b)(5)(ii).**

### **63.11092(b)(5)**

If you have chosen to comply with the performance testing alternatives provided under paragraph (a)(2) or paragraph (a)(3) of this section, the monitored operating parameter value may be determined according to the provisions in paragraph (b)(5)(i) or paragraph (b)(5)(ii) of this section.

**The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).**

**As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.**

**For this reason, paragraph (b)(5) applies.**

**The terminal does not have a monitored operating parameter value specified in the conditions of its current Tier I permit. Therefore, the terminal elected to submit an engineering assessment and manufacturer's recommendation with administrator approval under paragraph (b)(5)(ii).**

### **63.11092(b)(5)(i)**

Monitor an operating parameter that has been approved by the Administrator and is specified in your facility's current enforceable operating permit. At the time that the Administrator requires a new performance test, you must determine the monitored operating parameter value according to the requirements specified in paragraph (b) of this section.

**The terminal does not have a monitored operating parameter value specified in the conditions of its current Tier I permit. Therefore, the terminal cannot select paragraph (b)(5)(i) to obtain administrator approval of its compliance demonstration method for the VCU under paragraph (b) of §63.11092.**

### **63.11092(b)(5)(ii)**

Determine an operating parameter value based on engineering assessment and the manufacturer's recommendation and submit the information specified in paragraph (b)(4) of this section for approval by the Administrator. At the time that the Administrator requires a new performance test, you must determine the monitored operating parameter value according to the requirements specified in paragraph (b) of this section.

**The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).**

**As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.**

**For this reason, paragraph (b)(5) applies.**

**The terminal does not have a monitored operating parameter value specified in the conditions of its current Tier I permit. Therefore, the terminal elected to submit an engineering assessment and manufacturer's recommendation with administrator approval under paragraph (b)(5)(ii).**

**To fulfill this requirement, the facility previously prepared and submitted a monitoring plan developed in accordance with the requirements in paragraph (b)(1)(iii)(B) for "a thermal oxidation system other than a flare" that does not continuously record temperature.**

**Two relevant excerpts from the monitoring plan are provided here:**

**(1)**

The VCU at the Boise Terminal is equipped with an ultraviolet (UV) beam sensor. The VCU programmable logic controller (PLC) receives input from the UV beam sensor when the pilot assemblies have a sufficient flame to energize a permissive relay. This gives a permissive signal to the terminal automation system to allow gasoline to be loaded at the loading rack. If the pilot assemblies fail to ignite or if the pilot flame goes out and the ultraviolet beam sensor signal is lost, the VCU will shut down on a pilot failure fault. This will cause the permissive signal to be lost at the terminal automation system, and gasoline loading to the loading rack will be prevented. In the event of a pilot failure fault, terminal personnel will be required to manually reset the VCU, a successful restart of the VCU is required before gasoline loading to the loading rack can resume.

**(2)**

Conditions that could be considered malfunctions of the VCU are specified in the VCU Operators Manual, included in Appendix B of this Plan. The manual includes specific malfunctions of the VCU as well as solutions to the malfunctions. As previously discussed, two primary VCU malfunctions include both the pilot fault and blower fault, which both require that terminal personnel manually reset the VCU as the primary corrective action. The PLC will not allow TLO to load gasoline unless the VCU is operating properly. As such, TLO will correct any malfunctions of the VCU in a timely manner and prior to loading gasoline at the loading rack.

TLO will keep permanent records of all VCU malfunctions including a description of the corrective action, the length of time it took to fix the malfunction, and the estimated amount of gasoline loaded during the malfunction. The VCU malfunctions will be identified based on the VCU alarm history that is saved on site. Information in the permanent records will be applied to specific malfunction events in the future, providing insight into corrective actions that can be applied during specific events. It should be stressed that gasoline loading will automatically be prevented by the PLC if the VCU is not operating correctly, and the estimated volume of gasoline loaded will most likely be zero.

***In the context of NESHAP 6B compliance, TLO offers the following remarks to clarify how the monitoring plan specifies the VCU's continuous compliance demonstration method:***

- ***The monitored operating parameter is the number of pilot failure faults detected by the VCU's UV beam sensor. The monitored operating parameter is zero – that is, continuous compliance is achieved for any period in which the VCU's programmable logic controller has not received a pilot failure fault. Similar to the approach for sources conducting a performance test (paragraph (d)(4)), when the pilot light is monitored, detection of the pilot light failure is not a violation of the mg/L TOC standard as long as corrective actions described in the monitor plan are followed. This approach is taken in the terminal's monitor plan.***
- ***The continuous compliance demonstration requirement includes paragraph (d)(3) below, which requires that the terminal not exceed the monitored operating parameter value. Paragraph (d)(4), while not directly applicable to terminals that did not demonstrate initial compliance with a performance test, is relied on as well, as it clarifies that when pilot light presence is the monitored parameter value, an exceedance of the value is not a violation of the emission standard unless malfunction response requirements of the monitor plan are not followed (e.g., no automatic shutdown occurs).***
- ***According to the applicable requirement at §63.11094(f)(1) below, the terminal shall "Keep an up-to-date, readily accessible record of the continuous monitoring data required under § 63.11092(b) or § 63.11092(e). This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record." TLO keeps permanent records of any pilot failure faults continuously during operation of the product loading rack. TLO also records the periods during which gasoline loading events take place. Continuous compliance is assured by verifying that the number of pilot failure faults during gasoline loading is zero, or that in the event of a fault, an automated shutdown took place followed by VCU maintenance procedures.***
- ***TLO's continuous compliance demonstration method for the product loading rack and VCU is similar to the regulatory NESHAP 6B continuous compliance demonstration method in paragraph (b)(1)(iii)(B)(2) above.***
  - ***A monitoring plan has been developed according to subparagraph (2).***
  - ***In the event of a fault, the VCU is automatically shut down, as specified at subparagraph (2)(i).***
  - ***Daily verifications of proper operation of the assist air blower and vapor line valve are performed according to subparagraph (2)(ii). The automated monitoring of VCU operation satisfies this requirement. Additionally, TLO's monitoring plan specifies a manual restart of the VCU in the event of a malfunction.***
  - ***Semiannual preventive maintenance inspections are performed according to subparagraph (2)(iii).***
  - ***The monitoring plan specifies malfunctions of the thermal oxidation system as required by subparagraph (2)(iv). Malfunctions are detected using the VCU manufacturer's design for error detection.***
  - ***As noted above, TLO keeps permanent records of all malfunctions, as required by subparagraph (2)(v).***
- ***While the above requirements do not directly apply to loading racks that did not perform initial performance tests under NESHAP 6B (§63.11092(b)(1) above), TLO's continuous compliance demonstration method closely follows the language of the rule.***

DEQ approved the proposed monitoring of the presence of a pilot flame in the VCU under the condition that a source test be conducted once during each Tier I (Title V) permit term to assure compliance with the 35 mg/l standard. Any vapor leaks that may occur do to blower or valve malfunction are subject to the requirements of §63.11089.

### **63.11092(c)**

For performance tests performed after the initial test required under paragraph (a) of this section, the owner or operator shall document the reasons for any change in the operating parameter value since the previous performance test.

***The product loading rack at the terminal is not required to perform ongoing performance testing under NESHAP 6B.***

***Should a future performance test be conducted, this paragraph would apply.***

### **63.11092(d)**

Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall comply with the requirements in paragraphs (d)(1) through (4) of this section.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(d). The applicability of paragraphs (d)(1) through (4) to the product loading rack is described in detail below.***

#### **63.11092(d)(1)**

Operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the operating parameter value for the parameters described in paragraph (b)(1) of this section.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in paragraph (d).***

***As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***For this reason, paragraph (b)(5) of this section applies, and paragraph (b)(1) for terminals conducting an initial performance test does not apply. Therefore, paragraph (d)(1) also does not apply.***

#### **63.11092(d)(2)**

In cases where an alternative parameter pursuant to paragraph (b)(1)(iv) or paragraph (b)(5)(i) of this section is approved, each owner or operator shall operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the alternative operating parameter value.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in paragraph (d).***

***As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

**To select a monitored operating parameter, the terminal complies with paragraph (b)(5)(ii) of this section. Paragraph (d)(2) applies only when an alternative parameter is selected in accordance with (b)(5)(i), so paragraph (d)(2) is marked not applicable.**

### **63.11092(d)(3)**

Operation of the vapor processing system in a manner exceeding or going below the operating parameter value, as appropriate, shall constitute a violation of the emission standard in § 63.11088(a), except as specified in paragraph (d)(4) of this section.

**The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in paragraph (d), including paragraph (d)(3).**

**The monitored operating parameter specified at paragraph (b)(5) and in the terminal's monitor plan is the number of pilot failure faults detected by the VCU's controller. The parameter value is zero – if a pilot failure fault is detected, the VCU will be automatically shut down.**

**As described at paragraph (d)(4) below, paragraph (d)(4) does not directly apply because the terminal is not directly subject to paragraph (b)(1) for terminals demonstrating initial compliance with an initial performance test. However, as described at paragraph (b)(5) above, the terminal's monitoring parameter value and monitor plan follow the structure of paragraph (b)(1)(iii)(B)(2) for thermal oxidizers, other than flares, monitoring pilot light presence. The terminal's continuous compliance demonstration method therefore includes the approach in paragraph (d)(4) specifying that a pilot failure fault is not a violation of the 35 mg/L TOC emission standard unless the monitor plan's corrective actions are not followed. Therefore, the operating parameter value is set with regard to paragraph (b)(4).**

### **63.11092(d)(4)**

For the monitoring and inspection, as required under paragraphs (b)(1)(i)(B)(2) and (b)(1)(iii)(B)(2) of this section, malfunctions that are discovered shall not constitute a violation of the emission standard in § 63.11088(a) if corrective actions as described in the monitoring and inspection plan are followed. The owner or operator must:

**The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in paragraph (d).**

**As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.**

**For this reason, paragraph (b)(5) of this section applies, and paragraph (b)(1) for terminals conducting an initial performance test does not apply. Therefore, paragraph (d)(4) also does not apply.**

### **63.11092(d)(4)(i)**

Initiate corrective action to determine the cause of the problem within 1 hour;

### **63.11092(d)(4)(ii)**

Initiate corrective action to fix the problem within 24 hours;

### **63.11092(d)(4)(iii)**

Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions;

### **63.11092(d)(4)(iv)**

Minimize periods of start-up, shutdown, or malfunction; and

### **63.11092(d)(4)(v)**

Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem.

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in paragraph (d).***

***As described in §63.11092 paragraph (a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***For this reason, paragraph (b)(5) of this section applies, and paragraph (b)(1) for terminals conducting an initial performance test does not apply. Therefore, paragraph (d)(4)(i) through (v) also do not apply.***

### **63.11092(e)**

Each owner or operator subject to the emission standard in § 63.11087 for gasoline storage tanks shall comply with the requirements in paragraphs (e)(1) through (3) of this section.

***The terminal stores gasoline in the following storage tanks: Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208. Three of the gasoline storage tanks are subject to and comply with NSPS Kb: Tanks 202, 203, and 204. §63.11087(f) specifies that these tanks are deemed in compliance with §63.11087. No further work practice, monitoring, recordkeeping, or reporting requirements under this section apply to Tanks 202, 203, and 204. Therefore, no provisions under §63.11092(e) apply to Tanks 202, 203 and 204. The remaining gasoline storage tanks are subject to the emission standard in §63.11087; therefore, the provisions under §63.11092(e) apply.***

***Tanks storing other materials at the site do not meet the definition of "gasoline," either because their Reid vapor pressure (RVP) is lower than 27.6 kPa (4.0 psia) or because they are not used as fuel for internal combustion engines. Tanks storing diesel, jet kerosene, and ethanol are not "gasoline" because their RVP are below the threshold. Tanks storing transmix, wastewater, and fuel additives are not storing gasoline because those liquids are not used as fuel for internal combustion engines.***

### **63.11092(e)(1)**

If your gasoline storage tank is equipped with an internal floating roof, you must perform inspections of the floating roof system according to the requirements of § 60.113b(a) if you are complying with option 2(b) in

Table 1 to this subpart, or according to the requirements of § 63.1063(c)(1) if you are complying with option 2(d) in Table 1 to this subpart.

***Currently, the gasoline storage tanks at the terminal not subject to NSPS Kb are subject to §63.11092(e)(2) for gasoline storage tanks with an external floating roof design. This paragraph (e)(1) applies only to internal floating roof tanks, so it is marked not applicable.***

### **63.11092(e)(2)**

If your gasoline storage tank is equipped with an external floating roof, you must perform inspections of the floating roof system according to the requirements of § 60.113b(b) if you are complying with option 2(c) in Table 1 to this subpart, or according to the requirements of § 63.1063(c)(2) if you are complying with option 2(d) in Table 1 to this subpart.

***Currently, the gasoline storage tanks at the terminal not subject to NSPS Kb are subject to §63.11092(e)(2) for gasoline storage tanks with an external floating roof design. Currently they comply with option 2(c) in Table 1 as well.***

### **63.11092(e)(3)**

If your gasoline storage tank is equipped with a closed vent system and control device, you must conduct a performance test and determine a monitored operating parameter value in accordance with the requirements in paragraphs (a) through (d) of this section, except that the applicable level of control specified in paragraph (a)(2) of this section shall be a 95-percent reduction in inlet total organic compounds (TOC) levels rather than 80 mg/l of gasoline loaded.

***Currently, the gasoline storage tanks at the terminal not subject to NSPS Kb are subject to §63.11092(e)(2) for gasoline storage tanks with an external floating roof design. This paragraph (e)(3) applies only to tanks with closed vent systems and control devices, so it is marked not applicable.***

### **63.11092(f)**

The annual certification test for gasoline cargo tanks shall consist of the test methods specified in paragraphs (f)(1) or (f)(2) of this section. Affected facilities that are subject to subpart XX of 40 CFR part 60 may elect, after notification to the subpart XX delegated authority, to comply with paragraphs (f)(1) and (2) of this section.

***The terminal's product loading rack is subject to NESHAP 6B. TLO complies with the requirement to load only gasoline cargo tanks that have vapor tightness certification. TLO demonstrates continuous compliance with the requirement by using an electronic certification verification system. A tank truck that cannot produce a valid vapor tightness certification is prohibited from loading at the terminal.***

### **63.11092(f)(1) EPA Method 27, Appendix A-8, 40 CFR part 60.**

Conduct the test using a time period (t) for the pressure and vacuum tests of 5 minutes. The initial pressure (P<sub>i</sub>) for the pressure test shall be 460 millimeters (mm) of water (18 inches of water), gauge. The initial vacuum (V<sub>i</sub>) for the vacuum test shall be 150 mm of water (6 inches of water), gauge. The maximum allowable pressure and vacuum changes ( $\Delta p$ ,  $\Delta v$ ) for all affected gasoline cargo tanks is 3 inches of water, or less, in 5 minutes.

***The terminal's product loading rack is subject to NESHAP 6B. TLO complies with the requirement to load only gasoline cargo tanks that have vapor tightness certification. TLO demonstrates***

***continuous compliance with the requirement by using an electronic certification verification system.***

***To obtain vapor tightness certification, trucks must use EPA Method 27 to test vapor tightness.***

### **63.11092(f)(2) Railcar bubble leak test procedures.**

As an alternative to the annual certification test required under paragraph (1) of this section for certification leakage testing of gasoline cargo tanks, the owner or operator may comply with paragraphs (f)(2)(i) and (ii) of this section for railcar cargo tanks, provided the railcar cargo tank meets the requirement in paragraph (f)(2)(iii) of this section.

***The terminal does not load gasoline to railcar cargo tanks, so the provisions pertaining to railcar cargo tanks are marked inapplicable.***

#### **63.11092(f)(2)(i)**

Comply with the requirements of 49 CFR 173.31(d), 49 CFR 179.7, 49 CFR 180.509, and 49 CFR 180.511 for the periodic testing of railcar cargo tanks.

***The terminal does not load gasoline to railcar cargo tanks, so the provisions pertaining to railcar cargo tanks are marked inapplicable.***

#### **63.11092(f)(2)(ii)**

The leakage pressure test procedure required under 49 CFR 180.509(j) and used to show no indication of leakage under 49 CFR 180.511(f) shall be ASTM E 515-95, BS EN 1593:1999, or another bubble leak test procedure meeting the requirements in 49 CFR 179.7, 49 CFR 180.505, and 49 CFR 180.509.

***The terminal does not load gasoline to railcar cargo tanks, so the provisions pertaining to railcar cargo tanks are marked inapplicable.***

#### **63.11092(f)(2)(iii)**

The alternative requirements in this paragraph (f)(2) may not be used for any railcar cargo tank that collects gasoline vapors from a vapor balance system and the system complies with a Federal, State, local, or tribal rule or permit. A vapor balance system is a piping and collection system designed to collect gasoline vapors displaced from a storage vessel, barge, or other container being loaded, and routes the displaced gasoline vapors into the railcar cargo tank from which liquid gasoline is being unloaded.

***The terminal does not load gasoline to railcar cargo tanks, so the provisions pertaining to railcar cargo tanks are marked inapplicable.***

### **63.11092(g) Conduct of performance tests.**

Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator, based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

***No activities at the terminal are required to perform ongoing performance testing under NESHAP 6B.***

***Should a future performance test be conducted, this paragraph would apply.***

[73 FR page 1933, Jan. 10, 2008, as amended at 73 FR page 12276, Mar. 7, 2008; 76 FR page 4177, Jan. 24, 2011]

## Notifications, Records, and Reports

### § 63.11093 What notifications must I submit and when?

#### 63.11093(a)

Each owner or operator of an affected source under this subpart must submit an Initial Notification as specified in § 63.9(b). If your facility is in compliance with the requirements of this subpart at the time the Initial Notification is due, the Notification of Compliance Status required under paragraph (b) of this section may be submitted in lieu of the Initial Notification.

***The terminal, being an affected source under this subpart, was required to submit an Initial Notification. This section is marked as not applicable, because the initial notification was already filed and is not an ongoing requirement.***

#### 63.11093(b)

Each owner or operator of an affected source under this subpart must submit a Notification of Compliance Status as specified in § 63.9(h). The Notification of Compliance Status must specify which of the compliance options included in Table 1 to this subpart is used to comply with this subpart.

***The terminal, being an affected source under this subpart, was required to submit a Notification of Compliance Status. This section is marked as not applicable because the Notification of Compliance Status was already filed and is not an ongoing requirement.***

#### 63.11093(c)

Each owner or operator of an affected bulk gasoline terminal under this subpart must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11092(a) or § 63.11092(b).

***No activity at the terminal is subject to ongoing performance testing requirements under NESHAP 6B. The terminal complied with the performance test requirement using the compliance demonstration method of operating under a lower, enforceable permit limit prior to the compliance date per §63.11092(a)(2). Therefore, the terminal was not subject to the requirement to submit a Notification of Performance Test.***

#### 63.11093(d)

Each owner or operator of any affected source under this subpart must submit additional notifications specified in § 63.9, as applicable.

***The terminal, being an affected source under this subpart, is required to submit all applicable notifications in the General Provisions for NESHAP, 40 CFR 63 Subpart A.***

### § 63.11094 What are my recordkeeping requirements?

### **63.11094(a)**

Each owner or operator of a bulk gasoline terminal or pipeline breakout station whose storage vessels are subject to the provisions of this subpart shall keep records as specified in § 60.115b of this chapter if you are complying with options 2(a), 2(b), or 2(c) in Table 1 to this subpart, except records shall be kept for at least 5 years. If you are complying with the requirements of option 2(d) in Table 1 to this subpart, you shall keep records as specified in § 63.1065.

***The terminal stores gasoline in the following storage tanks: Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208. Tanks storing other materials at the site do not meet the definition of "gasoline," either because their Reid vapor pressure (RVP) is lower than 27.6 kPa (4.0 psia) or because they are not used as fuel for internal combustion engines. Tanks storing diesel, jet kerosene, and ethanol are not "gasoline" because their RVP are below the threshold. Tanks storing transmix, wastewater, and fuel additives are not storing gasoline because those liquids are not used as fuel for internal combustion engines.***

***The terminal operates three gasoline storage tanks that are subject to and comply with NSPS Kb: Tanks 202, 203, and 204. §63.11087(f) specifies that these tanks are deemed in compliance with §63.11087. No further work practice, monitoring, recordkeeping, or reporting requirements under this section apply to Tanks 202, 203, and 204. Therefore, no provisions under §63.11094(a) apply to Tanks 202, 203 and 204.***

***The remaining gasoline storage tanks (12, 13, 164, 165, 166, 200, 208) comply with option 2(c) of Table 1, so they are subject to the recordkeeping requirements of §63.11094(a).***

### **63.11094(b)**

Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall keep records of the test results for each gasoline cargo tank loading at the facility as specified in paragraphs (b)(1) through (3) of this section.

***The terminal's product loading rack is subject to this subpart, and is required to comply with certain recordkeeping requirements in §63.11094. TLO demonstrates continuous compliance by operating "a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading" in accordance with § 63.11094(c)(2). Therefore, according to the language of paragraph (c), paragraph (c) supersedes this paragraph (b) and paragraph (b) (including (b)(1), (b)(2), and (b)(3)) does not apply.***

***The annual certification testing of gasoline cargo tanks performed under § 63.11092(f)(1) is kept in the terminal automation system as noted in paragraph (c)(2), not in hard copy format***

#### **63.11094(b)(1)**

Annual certification testing performed under § 63.11092(f)(1) and periodic railcar bubble leak testing performed under § 63.11092(f)(2).

***The non-applicability rationale of paragraph (b) applies to paragraphs under (b)(1).***

#### **63.11094(b)(2)**

The documentation file shall be kept up-to-date for each gasoline cargo tank loading at the facility. The documentation for each test shall include, as a minimum, the following information:

*The non-applicability rationale of paragraph (b) applies to all paragraphs under (b)(2).*

**63.11094(b)(2)(i)**

*Name of test:* Annual Certification Test—Method 27 or Periodic Railcar Bubble Leak Test Procedure.

**63.11094(b)(2)(ii)**

Cargo tank owner's name and address.

**63.11094(b)(2)(iii)**

Cargo tank identification number.

**63.11094(b)(2)(iv)**

Test location and date.

**63.11094(b)(2)(v)**

Tester name and signature.

**63.11094(b)(2)(vi)**

*Witnessing inspector, if any:* Name, signature, and affiliation.

**63.11094(b)(2)(vii)**

*Vapor tightness repair:* Nature of repair work and when performed in relation to vapor tightness testing.

**63.11094(b)(2)(viii)**

*Test results:* Test pressure; pressure or vacuum change, mm of water; time period of test; number of leaks found with instrument; and leak definition.

**63.11094(b)(3)**

If you are complying with the alternative requirements in § 63.11088(b), you must keep records documenting that you have verified the vapor tightness testing according to the requirements of the Administrator.

***The alternative requirements in §63.11088(b) apply only to railcars. The terminal does not have the capability to load gasoline into railcars.***

**63.11094(c)**

As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in paragraph (b) of this section, an owner or operator may comply with the requirements in either paragraph (c)(1) or paragraph (c)(2) of this section.

***The terminal's product loading rack is subject to this subpart, and is required to comply with***

*certain recordkeeping requirements in §63.11094. TLO demonstrates continuous compliance by operating "a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading" in accordance with § 63.11094(c)(2).*

*The annual certification testing of gasoline cargo tanks performed under § 63.11092(f)(1) is kept in the terminal automation system as noted in paragraph (c)(2), not in hard copy format.*

#### **63.11094(c)(1)**

An electronic copy of each record is instantly available at the terminal.

#### **63.11094(c)(1)(i)**

The copy of each record in paragraph (c)(1) of this section is an exact duplicate image of the original paper record with certifying signatures.

#### **63.11094(c)(1)(ii)**

The Administrator is notified in writing that each terminal using this alternative is in compliance with paragraph (c)(1) of this section.

*As noted above under paragraph (c), the terminal complies with paragraph (c)(2) rather than (c)(1).*

#### **63.11094(c)(2)**

For facilities that use a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation is made available (e.g., via facsimile) for inspection by the Administrator's delegated representatives during the course of a site visit, or within a mutually agreeable time frame.

#### **63.11094(c)(2)(i)**

The copy of each record in paragraph (c)(2) of this section is an exact duplicate image of the original paper record with certifying signatures.

#### **63.11094(c)(2)(ii)**

The Administrator is notified in writing that each terminal using this alternative is in compliance with paragraph (c)(2) of this section.

*The terminal's product loading rack is subject to this subpart, and is required to comply with certain recordkeeping requirements in §63.11094. TLO demonstrates continuous compliance by operating "a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading" in accordance with § 63.11094(c)(2).*

*The annual certification testing of gasoline cargo tanks performed under § 63.11092(f)(1) is kept in the terminal automation system as noted in paragraph (c)(2), not in hard copy format. This satisfies the requirement of paragraph (b)(1). Information included matches the requirements of paragraph (b)(2).*

#### **63.11094(d)**

Each owner or operator subject to the equipment leak provisions of § 63.11089 shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. For facilities electing to implement an instrument program under § 63.11089, the record shall contain a full description of the program.

***The terminal's equipment in vapor and liquid gasoline service is subject to this subpart (§63.11089), and is required to comply with the recordkeeping requirements for equipment in gasoline service in this paragraph. TLO demonstrates continuous compliance by maintaining a log of fugitive equipment leak inspections and equipment locations.***

**63.11094(e)**

Each owner or operator of an affected source subject to equipment leak inspections under § 63.11089 shall record in the log book for each leak that is detected the information specified in paragraphs (e)(1) through (7) of this section.

***The terminal's equipment in vapor and liquid gasoline service is subject to this subpart (§63.11089), and is required to comply with the recordkeeping requirements for equipment in gasoline service in this paragraph. TLO demonstrates continuous compliance by maintaining a log of fugitive equipment leak inspections and equipment locations. The inspection log records the following information in paragraphs (e)(1) through (7).***

**63.11094(e)(1)**

The equipment type and identification number.

**63.11094(e)(2)**

The nature of the leak (i.e., vapor or liquid) and the method of detection (i.e., sight, sound, or smell).

**63.11094(e)(3)**

The date the leak was detected and the date of each attempt to repair the leak.

**63.11094(e)(4)**

Repair methods applied in each attempt to repair the leak.

**63.11094(e)(5)**

"Repair delayed" and the reason for the delay if the leak is not repaired within 15 calendar days after discovery of the leak.

**63.11094(e)(6)**

The expected date of successful repair of the leak if the leak is not repaired within 15 days.

**63.11094(e)(7)**

The date of successful repair of the leak.

**63.11094(f)**

Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall:

**63.11094(f)(1)**

Keep an up-to-date, readily accessible record of the continuous monitoring data required under § 63.11092(b) or § 63.11092(e). This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record.

***The terminal's product loading rack is required to perform continuous monitoring under §63.11092(b)(5)(ii).***

***The discussion of applicability provided at §63.11092(b)(5)(ii) includes the monitored operating parameter and value.***

***As noted in that discussion, the continuous monitoring data consists of permanent records of any pilot failure faults detected during continuous monitoring of the pilot light during operation of the product loading rack, as well as records of the periods during which gasoline loading events took place.***

**63.11094(f)(2)**

Record and report simultaneously with the Notification of Compliance Status required under § 63.11093(b):

***The terminal, being an affected source under this subpart, has historically filed the Notification of Compliance Status and the accompanying information requested in this paragraph. This paragraph is marked not applicable because the Notification of Compliance Status is not an ongoing requirement.***

**63.11094(f)(2)(i)**

All data and calculations, engineering assessments, and manufacturer's recommendations used in determining the operating parameter value under § 63.11092(b) or § 63.11092(e); and

***The terminal, being an affected source under this subpart, has historically filed the Notification of Compliance Status and the accompanying information requested in this paragraph. This paragraph is marked not applicable because the Notification of Compliance Status is not an ongoing requirement.***

**63.11094(f)(2)(ii)**

The following information when using a flare under provisions of § 63.11(b) to comply with § 63.11087(a):

***This paragraph is marked not applicable because the terminal complies with its emission limit using a VCU, which is not a flare as defined at §63.11100 and meeting the requirements of §63.11(b).***

**63.11094(f)(2)(ii)(A)**

Flare design (i.e., steam-assisted, air-assisted, or non-assisted); and

**63.11094(f)(2)(ii)(B)**

All visible emissions (VE) readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required under § 63.11092(e)(3).

***This section is marked not applicable because the terminal complies with its emission limit using a VCU, which is not a flare as defined at §63.11100 and meeting the requirements of §63.11(b).***

**63.11094(f)(3)**

Keep an up-to-date, readily accessible copy of the monitoring and inspection plan required under § 63.11092(b)(1)(i)(B)(2) or § 63.11092(b)(1)(iii)(B)(2).

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***As described in §63.11092(a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***For this reason, the terminal complies with §63.11092(b)(5), rather than (b)(1). Because this current paragraph §63.11094(f)(3) applies only to terminals subject to §63.11092(b)(1), the paragraph does not apply to the terminal.***

***Nevertheless, it is important to note in this context that the terminal's monitoring parameter in §63.11092(b)(5) is the presence of a pilot light. The terminal has therefore prepared a monitoring and inspection plan in accordance with §63.11092(b)(1)(iii)(B)(2). This plan is attached to this Form FRA for reference.***

**63.11094(f)(4)**

Keep an up-to-date, readily accessible record of all system malfunctions, as specified in § 63.11092(b)(1)(i)(B)(2)(v) or § 63.11092(b)(1)(iii)(B)(2)(v).

***The terminal, being a source that must comply with an emission limit for the product loading rack, must demonstrate continuous compliance according to NESHAP 6B provisions in this paragraph, §63.11092(b).***

***As described in §63.11092(a) above, the terminal did not conduct a performance test under paragraph (a)(1). Instead, the terminal demonstrated initial compliance according to paragraph (a)(2), by demonstrating compliance with an enforceable limit in the terminal's current Tier I permit.***

***For this reason, the terminal complies with §63.11092(b)(5), rather than (b)(1). Because this current paragraph §63.11094(f)(3) applies only to terminals subject to §63.11092(b)(1), the paragraph does not apply to the terminal.***

**Nevertheless, it is important to note in this context that the terminal's monitoring parameter in §63.11092(b)(5) is the presence of a pilot light. The terminal has therefore prepared a monitoring and inspection plan in accordance with §63.11092(b)(1)(iii)(B)(2). This plan is attached to this Form FRA for reference. The terminal keeps up-to-date, readily accessible records of all system malfunctions.**

#### **63.11094(f)(5)**

If an owner or operator requests approval to use a vapor processing system or monitor an operating parameter other than those specified in § 63.11092(b), the owner or operator shall submit a description of planned reporting and recordkeeping procedures.

**Because the terminal has not requested approval for a system or monitored parameter outside those specified in §63.11092(b), this section is marked not applicable.**

#### **63.11094(g)**

Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (g)(1) and (2) of this section.

**The terminal, being an affected source under this subpart, is required to keep records as required in this section.**

#### **63.11094(g)(1)**

Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

**The terminal, being an affected source under this subpart, is required to keep records as required in this section.**

#### **63.11094(g)(2)**

Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11085(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

**The terminal, being an affected source under this subpart, is required to keep records as required in this section. As discussed in §63.11092(b)(5)(ii) above, the terminal's VCU is equipped with an interlock system that will shut down loading operations when the VCU pilot flame is not detected.**

[Amended at 76 FR page 4178, Jan. 24, 2011]

### **§ 63.11095 What are my reporting requirements?**

#### **63.11095(a)**

Each owner or operator of a bulk terminal or a pipeline breakout station subject to the control requirements of this subpart shall include in a semiannual compliance report to the Administrator the following information, as applicable:

**The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph.**

### **63.11095(a)(1)**

For storage vessels, if you are complying with options 2(a), 2(b), or 2(c) in Table 1 to this subpart, the information specified in § 60.115b(a), § 60.115b(b), or § 60.115b(c) of this chapter, depending upon the control equipment installed, or, if you are complying with option 2(d) in Table 1 to this subpart, the information specified in § 63.1066.

*The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph.*

*The terminal stores gasoline in the following storage tanks: Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208. Tanks storing other materials at the site do not meet the definition of "gasoline," either because their Reid vapor pressure (RVP) is lower than 27.6 kPa (4.0 psia) or because they are not used as fuel for internal combustion engines. Tanks storing diesel, jet kerosene, and ethanol are not "gasoline" because their RVP are below the threshold. Tanks storing transmix, wastewater, and fuel additives are not storing gasoline because those liquids are not used as fuel for internal combustion engines.*

*The terminal operates three gasoline storage tanks that are subject to and comply with NSPS Kb: Tanks 202, 203, and 204. §63.11087(f) specifies that these tanks are deemed in compliance with §63.11087. No further work practice, monitoring, recordkeeping, or reporting requirements under this section apply to Tanks 202, 203, and 204. Therefore, no provisions under §63.11095 apply to Tanks 202, 203 and 204.*

*The remaining gasoline storage tanks (12, 13, 164, 165, 166, 200, 208) are external floating roof tanks complying with option 2(c) of Table 1, so they are subject to the reporting requirements of §63.11095(a)(1).*

### **63.11095(a)(2)**

For loading racks, each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility.

*The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph. The terminal's product loading rack is subject to this subpart, and is required to comply with the reporting requirement for semiannual compliance reporting at this paragraph (§63.11095(a)(2)).*

### **63.11095(a)(3)**

For equipment leak inspections, the number of equipment leaks not repaired within 15 days after detection.

*The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph. The terminal comprises some equipment in liquid or vapor gasoline service. Therefore, this provision applies to the terminal.*

### **63.11095(a)(4)**

For storage vessels complying with § 63.11087(b) after January 10, 2011, the storage vessel's Notice of Compliance Status information can be included in the next semi-annual compliance report in lieu of filing a separate Notification of Compliance Status report under § 63.11093.

*This section is marked not applicable because the terminal's gasoline storage tanks were in*

compliance with NESHAP 6B prior to January 10, 2011. No future semiannual compliance reports are expected to contain notifications of tank initial compliance status.

#### **63.11095(b)**

Each owner or operator of an affected source subject to the control requirements of this subpart shall submit an excess emissions report to the Administrator at the time the semiannual compliance report is submitted. Excess emissions events under this subpart, and the information to be included in the excess emissions report, are specified in paragraphs (b)(1) through (5) of this section.

*The terminal, being an affected source under this subpart, is required to file excess emission reports with the information requested in this paragraph. Paragraphs (b)(1) through (4) apply to gasoline loading racks, and paragraph (b)(5) applies to equipment in gasoline service. The terminal's product loading rack and the terminal's equipment in gasoline service are subject to control requirements under this subpart. Details on the product loading rack's control requirement can be found in the applicability description of §§ 63.11081(i), 63.11088(a) and 63.11092(b)(5). Therefore, this provision (§63.11095(b)) applies to the terminal.*

#### **63.11095(b)(1)**

Each instance of a non-vapor-tight gasoline cargo tank loading at the facility in which the owner or operator failed to take steps to assure that such cargo tank would not be reloaded at the facility before vapor tightness documentation for that cargo tank was obtained.

*The terminal, being an affected source under this subpart, is required to file excess emission reports with the information requested in paragraph (b). The terminal's product loading rack is subject to control requirements under this subpart. Details on the product loading rack's control requirement can be found in the applicability description of §§ 63.11081(i), 63.11088(a) and 63.11092(b)(5). The product loading rack is subject to the control requirement at item 1(d) of Table 2, limiting gasoline loading to vapor tight trucks. Therefore, this provision applies to the terminal.*

#### **63.11095(b)(2)**

Each reloading of a non-vapor-tight gasoline cargo tank at the facility before vapor tightness documentation for that cargo tank is obtained by the facility in accordance with § 63.11094(b).

*The terminal, being an affected source under this subpart, is required to file excess emission reports with the information requested in paragraph (b). The terminal's product loading rack is subject to control requirements under this subpart. Details on the product loading rack's control requirement can be found in the applicability description of §§ 63.11081(i), 63.11088(a) and 63.11092(b)(5). The product loading rack is subject to the control requirement at item 1(d) of Table 2, limiting gasoline loading to vapor tight trucks. Therefore, this provision applies to the terminal.*

#### **63.11095(b)(3)**

Each exceedance or failure to maintain, as appropriate, the monitored operating parameter value determined under § 63.11092(b). The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a description and timing of the steps taken to repair or perform maintenance on the vapor collection and processing systems or the CMS.

*The terminal, being an affected source under this subpart, is required to file excess emission reports with the information requested in paragraph (b). The terminal's product loading rack is subject to control requirements under this subpart. Details on the product loading rack's control requirement can be found in the applicability description of §§ 63.11081(i), 63.11088(a) and 63.11092(b)(5). The terminal is not subject to the 80 mg/L TOC emission standard at item 1(b) of*

*Table 2 for gasoline loading racks, because the terminal is subject to a more stringent 35 mg/L TOC limit which becomes part of NESHAP 6B under the overlap provision of §63.11081(i). §63.11092(b) requires a continuous compliance demonstration method for the product loading rack, including a monitored parameter which is specified in this Form FRA at §63.11092(b)(5). Therefore, this provision (§63.11095(b)(3)) applies to the terminal.*

**63.11095(b)(4)**

Each instance in which malfunctions discovered during the monitoring and inspections required under § 63.11092(b)(1)(i)(B)(2) and (b)(1)(iii)(B)(2) were not resolved according to the necessary corrective actions described in the monitoring and inspection plan. The report shall include a description of the malfunction and the timing of the steps taken to correct the malfunction.

*The terminal, being an affected source under this subpart, is required to file excess emission reports with the information requested in paragraph (b). The terminal's product loading rack is subject to control requirements under this subpart. Details on the product loading rack's control requirement can be found in the applicability description of §§ 63.11081(i), 63.11088(a) and 63.11092(b)(5).*

*This provision (§63.11095(b)(4)) is marked not applicable because the terminal's product loading rack demonstrated initial compliance by complying with a preexisting emission limit (§63.11092(a)(2)) rather than by conducting an initial performance test ((a)(1)). Therefore, the monitoring provisions of §63.11092(b)(1) do not apply to the terminal.*

*However, it should be noted in this context that the terminal is required to submit a monitoring parameter and value for administrator approval under §63.11092(b)(5). Details on the monitoring parameter can be found in this Form FRA in the §63.11092(b)(5) applicability discussion.*

**63.11095(b)(5)**

For each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection:

*The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph. The terminal comprises some equipment in liquid or vapor gasoline service. Therefore, this provision (§63.11095(b)(5)) applies to the terminal.*

**63.11095(b)(5)(i)**

The date on which the leak was detected;

**63.11095(b)(5)(ii)**

The date of each attempt to repair the leak;

**63.11095(b)(5)(iii)**

The reasons for the delay of repair; and

**63.11095(b)(5)(iv)**

The date of successful repair.

*The terminal, being an affected source under this subpart, is required to file semiannual reports*

*with the information requested in this paragraph. The terminal comprises some equipment in liquid or vapor gasoline service. Therefore, this provision (§63.11095(b)(5)(i) through (iv)) applies to the terminal.*

#### **63.11095(c)**

Each owner or operator of a bulk gasoline plant or a pipeline pumping station shall submit a semiannual excess emissions report, including the information specified in paragraphs (a)(3) and (b)(5) of this section, only for a 6-month period during which an excess emission event has occurred. If no excess emission events have occurred during the previous 6-month period, no report is required.

*The terminal is not a bulk gasoline plant or a pipeline pumping station, so this provision (§63.11095(c)) is not applicable.*

#### **63.11095(d)**

Each owner or operator of an affected source under this subpart shall submit a semiannual report including the number, duration, and a brief description of each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11085(a), including actions taken to correct a malfunction. The report may be submitted as a part of the semiannual compliance report, if one is required. Owners or operators of affected bulk plants and pipeline pumping stations are not required to submit reports for periods during which no malfunctions occurred.

*The terminal, being an affected source under this subpart, is required to file semiannual reports with the information requested in this paragraph. TLO complies with the requirement to submit semiannual monitoring report, excess emissions reports, and malfunction reports.*

[73 FR page 1933, Jan. 10, 2008, as amended at 73 FR page 12276, Mar. 7, 2008; 76 FR page 4178, Jan. 24, 2011]

#### **Other Requirements and Information**

#### **§ 63.11098 What parts of the General Provisions apply to me?**

Table 3 to this subpart shows which parts of the General Provisions apply to you.

*TLO complies with applicable general requirements of 40 CFR 63 Subpart A.*

#### **§ 63.11099 Who implements and enforces this subpart?**

*The provisions of this section apply to the administrator and delegated authority of this subpart, not to the terminal.*

#### **63.11099(a)**

This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and

enforcement of this subpart is delegated to a State, local, or tribal agency.

**63.11099(b)**

In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities specified in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

**63.11099(c)**

The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

**63.11099(c)(1)**

Approval of alternatives to the requirements in §§ 63.11086 through 63.11088 and § 63.11092. Any owner or operator requesting to use an alternative means of emission limitation for storage vessels in Table 1 to this subpart must follow either the provisions in § 60.114b of this chapter if you are complying with options 2(a), 2(b), or 2(c) in Table 1 to this subpart, or the provisions in § 63.1064 if you are complying with option 2(d) in Table 1 to this subpart.

**63.11099(c)(2)**

Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

**63.11099(c)(3)**

Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

**63.11099(c)(4)**

Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

**§ 63.11100 What definitions apply to this subpart?**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), in subparts A, K, Ka, Kb, and XX of part 60 of this chapter, or in subparts A, R, and WW of this part. All terms defined in both subpart A of part 60 of this chapter and subparts A, R, and WW of this part shall have the meaning given in subparts A, R, and WW of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

*Administrator* means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this subpart).

*Bulk gasoline plant* means any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank, and subsequently loads the gasoline into gasoline cargo tanks for transport to gasoline dispensing facilities, and has a gasoline throughput of less than 20,000 gallons per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law, and discoverable by the Administrator and any

other person.

*Bulk gasoline terminal* means any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of 20,000 gallons per day or greater. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person.

*Equipment* means each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in the gasoline liquid transfer and vapor collection systems. This definition also includes the entire vapor processing system except the exhaust port(s) or stack(s).

*Flare* means a thermal oxidation system using an open (without enclosure) flame.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

*Gasoline cargo tank* means a delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.

*Gasoline storage tank or vessel* means each tank, vessel, reservoir, or container used for the storage of gasoline, but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of gasoline or gasoline vapors;
- (2) Subsurface caverns or porous rock reservoirs;
- (3) Oil/water separators and sumps, including butane blending sample recovery tanks, used to collect drained material such that it can be pumped to storage or back into a process; or
- (4) Tanks or vessels permanently attached to mobile sources such as trucks, railcars, barges, or ships.

*In gasoline service* means that a piece of equipment is used in a system that transfers gasoline or gasoline vapors.

*Monthly* means once per calendar month at regular intervals of no less than 28 days and no more than 35 days.

*Operating parameter value* means a value for an operating or emission parameter of the vapor processing system (e.g., temperature) which, if maintained continuously by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with the applicable emission standard. The operating parameter value is determined using the procedures specified in § 63.11092(b).

*Pipeline breakout station* means a facility along a pipeline containing storage vessels used to relieve surges or receive and store gasoline from the pipeline for re-injection and continued transportation by pipeline or to other facilities.

*Pipeline pumping station* means a facility along a pipeline containing pumps to maintain the desired pressure and flow of product through the pipeline, and not containing gasoline storage tanks other than surge control tanks.

*Submerged filling* means, for the purposes of this subpart, the filling of a gasoline cargo tank or a stationary storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11086(a) from the bottom of the tank. Bottom filling of gasoline cargo tanks or storage

tanks is included in this definition.

*Surge control tank or vessel* means, for the purposes of this subpart, those tanks or vessels used only for controlling pressure in a pipeline system during surges or other variations from normal operations.

*Vapor collection-equipped gasoline cargo tank* means a gasoline cargo tank that is outfitted with the equipment necessary to transfer vapors, displaced during the loading of gasoline into the cargo tank, to a vapor processor system.

*Vapor-tight gasoline cargo tank* means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f).

***TLO has used these definitions in preparing this regulatory applicability assessment.***

[76 FR page 4178, Jan. 24, 2011]

**Table 1 to Subpart BBBBBB of Part 63 —Applicability Criteria, Emission Limits, and Management Practices for Storage Tanks**

**If you own or operate . . .**

1. A gasoline storage tank meeting either of the following conditions: (i) a capacity of less than 75 cubic meters (m<sup>3</sup>); or (ii) a capacity of less than 151 m<sup>3</sup> and a gasoline throughput of 480 gallons per day or less. Gallons per day is calculated by summing the current day's throughput, plus the throughput for the previous 364 days, and then dividing that sum by 365

**Then you must . . .**

Equip each gasoline storage tank with a fixed roof that is mounted to the storage tank in a stationary manner, and maintain all openings in a closed position at all times when not in use.

***The terminal does not operate any gasoline tanks below this size. No tanks apply.***

2. A gasoline storage tank with a capacity of greater than or equal to 75 m<sup>3</sup> and not meeting any of the criteria specified in item 1 of this Table

Do the following: (a) Reduce emissions of total organic HAP or TOC by 95 weight-percent with a closed vent system and control device, as specified in § 60.112b(a)(3) of this chapter; or

***The terminal stores gasoline in the following storage tanks: Tanks 12, 13, 164, 165, 166, 200, 202, 203, 204, and 208. Tanks storing other materials at the site do not meet the definition of "gasoline," either because their Reid vapor pressure (RVP) is lower than 27.6 kPa (4.0 psia) or because they are not used as fuel for internal combustion engines. Tanks storing diesel, jet kerosene, and ethanol are not "gasoline" because their RVP are below the threshold. Tanks storing transmix, wastewater, and fuel additives are not storing gasoline because those liquids are not used as fuel for internal combustion engines.***

***Tanks 202, 203, and 204 comply with NSPS Kb and are deemed in compliance with NESHAP 6B. For these tanks, no emission standards or work***

**practice requirements apply under NESHAP 6B. For reference, the requirements applicable under NSPS Kb are listed on the Form FRA for NSPS Kb.**

**The work practice requirements applying to the gasoline storage tanks (other than those subject to NSPS Kb) is item 2(c) of Table 1 of NESHAP 6B, because the tanks are equipped with external floating roofs, and the terminal does not currently demonstrate compliance according to item 2(d) of the table.**

- (b) Equip each internal floating roof gasoline storage tank according to the requirements in § 60.112b(a)(1) of this chapter, except for the secondary seal requirements under § 60.112b(a)(1)(ii)(B) and the requirements in § 60.112b(a)(1)(iv) through (ix) of this chapter; and
- (c) Equip each external floating roof gasoline storage tank according to the requirements in § 60.112b(a)(2) of this chapter, except that the requirements of § 60.112b(a)(2)(ii) of this chapter shall only be required if such storage tank does not currently meet the requirements of § 60.112b(a)(2)(i) of this chapter; 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), except for the secondary seal requirements under § 63.1063(a)(1)(i)(C) and (D), 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).

**3. A surge control tank**

***The terminal does not operate surge control tanks; it is a terminus and may designate empty tanks for relief service, but does not maintain surge control tanks containing liquid.***

Equip each tank with a fixed roof that is mounted to the tank in a stationary manner and with a pressure/vacuum vent with a positive cracking pressure of no less than 0.50 inches of water. Maintain all openings in a closed position at all times when not in use.

[76 FR page 4179, Jan. 24, 2011]

**Table 2 to Subpart BBBB of Part 63 —Applicability Criteria, Emission Limits, and Management Practices for Loading Racks**

**If you own or operate . . .**

**Then you must . . .**

1. A bulk gasoline terminal loading rack(s) with a gasoline throughput (total of all racks) of 250,000 gallons per day, or greater. Gallons per day is calculated by summing the current day's throughput, plus the throughput for the previous 364 days, and then dividing that sum by 365

***The terminal operates one gasoline loading rack. This loading rack has historically operated at greater than 250,000 gal/day and complies with item 1 of this table.***

- (a) Equip your loading rack(s) with a vapor collection system designed to collect the TOC vapors displaced from cargo tanks during product loading; and (b) Reduce emissions of TOC to less than or equal to 80 mg/l of gasoline loaded into gasoline cargo tanks at the loading rack; and (c) Design and operate the vapor collection system to prevent any TOC vapors collected at one loading rack or lane from passing through another loading rack or lane to the atmosphere; and

- (d) Limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in § 60.502(e) through (j) of this chapter. For the purposes of this section, the term "tank truck" as used in § 60.502(e) through (j) of this chapter means "cargo tank" as defined in § 63.11100.

2. A bulk gasoline terminal loading rack(s) with a gasoline throughput (total of all racks) of less than 250,000 gallons per day. Gallons per day is calculated by summing the current day's throughput, plus the throughput for the previous 364 days, and then dividing that sum by 365

- (a) Use submerged filling with a submerged fill pipe that is no more than 6 inches from the bottom of the cargo tank; and (b) Make records available within 24 hours of a request by the Administrator to document your gasoline throughput.

[76 FR page 4179, Jan. 24, 2011]

***The following emission limits and management practices from Table 1 apply to the terminal's product loading rack:***

- ***Item 1a***
- ***Item 1c***
- ***Item 1d***

***Item 1b, the 80 mg/L TOC emission standard from NESHAP 6B, is superseded by the NSPS XX emission standard of 35 mg/L TOC at §60.502(b). Because of the overlap provision specified at §63.11081(i), the NESHAP 6B emission limit does not apply to the terminal. However, as described under §63.11092 in this Form FRA, the monitoring, recordkeeping, and reporting requirements of NESHAP 6B do apply. They are more stringent than those in NSPS XX, and their applicability is not nullified under the overlap provision in §63.11081(i).***

***Items 2a and 2b of Table 2 do not apply to the terminal's product loading rack because the terminal's product loading rack has a gasoline throughput greater than 250,000 gal/day (365-day average).***

**Table 3 to Subpart BBBB of Part 63 —Applicability of General Provisions**

<b>Citation</b>	<b>Subject</b>	<b>Brief description</b>	<b>Applies to subpart BBBB</b>
§ 63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in § 63.11081.

§ 63.1(c)(2)	Title V permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, § 63.11081(b) of subpart BBBBBB exempts identified area sources from the obligation to obtain title V operating permits.
§ 63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in § 63.11100.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities and Circumvention	Prohibited activities; circumvention, severability	Yes.
§ 63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes.
§ 63.6(a)	Compliance with Standards/Operation & Maintenance Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§ 63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources that Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, § 63.11083 specifies the compliance dates.
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources that Become Major	Area sources that become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§ 63.6(d)	[Reserved]		
§ 63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met	No. See § 63.11085 for general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as possible	Owner or operator must correct malfunctions as soon as possible	No.

§ 63.6(e) (2)	[Reserved]		
§ 63.6(e) (3)	Startup, Shutdown, and Malfunction (SSM) plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§ 63.6(f) (1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§ 63.6(f) (2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g) (1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h) (1)	Compliance with Opacity/VE Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§ 63.6(h) (2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§ 63.6(h) (2)(ii)	[Reserved]		
§ 63.6(h) (2)(iii)	Using Previous Tests to Demonstrate Compliance with Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§ 63.6(h) (3)	[Reserved]		
§ 63.6(h) (4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§ 63.6(h) (5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§ 63.6(h) (5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§ 63.6(h) (6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§ 63.6(h) (7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data from Performance Test	Must submit COMS data with other performance test data	No.
§ 63.6(h) (7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§ 63.6(h) (7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.

§ 63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)	No.
§ 63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§ 63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§ 63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§ 63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§ 63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§ 63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§ 63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§ 63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, § 63.11092(g) specifies conditions for conducting performance tests.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.

§ 63.7(e) (3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes, except for testing conducted under § 63.11092(a).
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 63.7(g) )	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years	Yes.
§ 63.7(h) )	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§ 63.8(a) (1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§ 63.8(a) (2)	Performance Specifications	Performance specifications in appendix B of 40 CFR part 60 apply	Yes.
§ 63.8(a) (3)	[Reserved]		
§ 63.8(a) (4)	Monitoring of Flares	Monitoring requirements for flares in § 63.11 apply	Yes.
§ 63.8(b) (1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§ 63.8(b) (2)– (3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§ 63.8(c) (1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§ 63.8(c) (1)(i)	Operation and Maintenance of CMS	Must maintain and operate each CMS as specified in No. § 63.6(e)(1)	
§ 63.8(c) (1)(ii)	Operation and Maintenance of CMS	Must keep parts for routine repairs readily available	Yes.
§ 63.8(c) (1)(iii)	Operation and Maintenance of CMS	Requirement to develop SSM Plan for CMS	No.
§ 63.8(c) (2)–(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	Yes.
§ 63.8(d) )	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after	No.

		revisions	
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes.
)			
§ 63.8(f)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
(1)–(5)			
§ 63.8(f)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
(6)			
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	Yes.
)			
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
)			
§ 63.9(b)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
(1)– (2), (4)–(5)			
§ 63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
)			
§ 63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
)			
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
)			
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
)			
§ 63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
)			
§ 63.9(h)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, except as specified in § 63.11095(a)(4); also, there are no opacity standards.
(1)– (6)			
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
)			
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
)			
§ 63.10(a)	Record-keeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
)			
§ 63.10(b)(1)	Record-keeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
)			
§ 63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.

§ 63.10( b)(2)(ii )	Records related to SSM	Recordkeeping of malfunctions	No. See § 63.11094(g) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§ 63.10( b)(2)(ii )	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§ 63.10( b)(2)(i v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10( b)(2)(v )	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10( b)(2)(v i)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	Yes.
§ 63.10( b)(2)(x ii)	Records	Records when under waiver	Yes.
§ 63.10( b)(2)(x iii)	Records	Records when using alternative to relative accuracy test	Yes.
§ 63.10( b)(2)(x iv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.
§ 63.10( b)(3)	Records	Applicability determinations	Yes.
§ 63.10( c)	Records	Additional records for CMS	No.
§ 63.10( d)(1)	General Reporting Requirements	Requirement to report	Yes.
§ 63.10( d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§ 63.10( d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§ 63.10( d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§ 63.10( d)(4)	SSM Reports	Contents and submission	No. See § 63.11095(d) for

d)(5)			malfunction reporting requirements.
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; 2-3 copies of COMS performance evaluation	No.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions	Yes, note that § 63.11095 specifies excess emission events for this subpart.
§ 63.10(e)(3)(i)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in § § 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	Yes, § 63.11095 specifies excess emission events for this subpart.
§ 63.10(e)(3)(v i)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in § § 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	Yes.
§ 63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	Yes.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§ 63.11(b)	Flares	Requirements for flares	Yes, the section references § 63.11(b).
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[Amended at 76 FR page 4180, Jan. 24, 2011]

## Appendix E - Facility Comments for Draft Permit

Andeavor is anticipating that the final Statement of Basis will provide a full documentation of IDEQ's applicability assessment of the Compliance Assurance Monitoring (CAM) program in 40 CFR Part 64. You (Dan Pitman) and I (Kirt Rhoads) and Harold Laurence (Trinity Consultants) exchanged e-mail communication in the first half of 2018 regarding CAM requirements now present in Section 10 of the draft permit. In particular, Andeavor is seeking further clarity from IDEQ about CAM applicability for the 37.60 tpy VOC limit. IDEQ finds that the 37.60 tpy limit is subject to CAM because it assumes the VCU's destruction efficiency. However, after IDEQ's proposed source testing requirements become part of the Tier I permit, the destruction efficiency will no longer be assumed, but rather tested in a way satisfactory to CAM requirements. The draft Tier I permit contains the compliance demonstration method for 40 CFR 63 Subpart BBBBBB, including IDEQ's requested source testing requirement in Condition 8.4. The source test requirement checks the destruction efficiency of the VCU. In turn, the compliance demonstration method for the 37.60 tpy VOC limit includes any 40 CFR 63 Subpart BBBBBB methods in the permit, according to draft Condition 5.1.a and Table 5.3. IDEQ's proposed source testing requirement, once in the permit, would become part of the compliance demonstration method for the 37.60 tpy VOC limit. Since the destruction efficiency of the VCU would then be part of the compliance demonstration method, the limit's control device emission reduction would no longer be "assumed" (40 CFR 64.2(b)(1)(vi)). Upon issuance of this draft permit as final, the 37.60 tpy limit would be exempt from CAM under 40 CFR 64.2(b)(1)(vi), just as the 35 mg/L limit is exempt from CAM. Generally, if a post-control emission limit has a compliance demonstration method equivalent to a post-1990 NES HAP, the method should already be sufficient not to "assume" destruction efficiency.

Andeavor is seeking that the Tier I draft Statement of Basis and final permit provide IDEQ's CAM applicability determination in light of the above.

**Response:**

In light of this comment DEQ has reassessed the applicability of CAM. As indicated on page 24 under the heading of CAM Applicability, it has been determined that the source is exempt from CAM and it has been removed from the permit.

As noted in comment on P-2014.0009, not all distillate oils stored at the terminal are marketed under the name "diesel." Andeavor characterizes all such oils as diesel based on their similar chemical properties. This comment is offered on Conditions 4.3 and 5.3.

**Response:**

Permit Conditions 4.3 and 5.3 includes quotes from the underlying permits which lists "diesel" fuel limits. It is believed that diesel is intended to be either ASTM Grade 1 or Grade 2 fuel oils.

Condition 8.2, paragraph (b) at the top of p. 32, reads: "The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test." To clarify a possible ambiguity, Andeavor notes that the inapplicable provisions in 40 CFR 63 Subpart BBBBBB contain a more stringent leak definition of 500 ppm for initial performance tests (§63.11092(a)(1)(i)). Andeavor's understanding is that IDEQ determines the conditions of performance testing as an alternative compliance method under §63.11092(b)(4) and (5), because the test in Condition 8.4 is not an initial performance test for 40 CFR 63 Subpart BBBBBB. As written, the permit uses 10,000 ppm as the pre-test leak definition. If 500 ppm was intended, Andeavor recommends adding a clarifying condition, e.g. as "Condition 8.5."

**Response:**

DEQ has updated Permit Condition 8.2 to clarify that 500 ppm is the threshold upon which leak repair must occur. This is supported by Subpart BBBBBB which allows the permittee to comply with the most stringent requirement, including the most stringent monitoring requirement. In accordance with 40 CFR 63.11081(i) it is the permittee's responsibility to assure the most stringent requirement is

followed; noncompliance with this rule is not excused if it is later determined that your determination was in error. Also, this leak threshold is part of the approved monitoring plan under Subpart BBBBBB.