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**AIR AND RADIATION ADMINISTRATION  
DRAFT PART 70 OPERATING PERMIT**

**DOCKET # 24-510-0677**

**COMPANY:** Petroleum Fuel and Terminal Company  
Erdman Avenue Facility

**LOCATION:** 5101 Erdman Avenue, Baltimore MD 21205

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT  
AIR AND RADIATION ADMINISTRATION  
AIR QUALITY PERMITS PROGRAM**

**PART 70/ TITLE V OPERATING PERMIT PROGRAM OVERVIEW**

**Origin of the Part 70 Operating Permit**

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Permit) that will identify all air emissions sources at a given facility with the applicable federal regulations, and will establish the methodology by which the owner/operator will demonstrate compliance. Required testing, monitoring, record-keeping, and reporting for each emissions source are identified, including regulation citation. This Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

The Department has had an Air Quality Operating Permit program for many years. The State-Only enforceable permit conditions and applicable regulations listed in Air Quality Permits to Construct issued to a facility will be incorporated into the Part 70 Operating Permit in a separate section. The Department will continue to enforce these state-only requirements. The Part 70 Operating permit will supersede a facility's current State Permit to Operate upon issuance.

Part 70 Operating permits are not for new construction, and do not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A few facilities which were not subject to Maryland's existing State Permit to Operate Program will be subject to the requirements of the Part 70 Program. The Part 70 Program is based on a facility's potential to emit regulated air pollutants. The State Permit to Operate program is based on types of sources specifically listed in the Code of Maryland Regulations (COMAR). For these few facilities which were not required to receive a state Permit to Operate but are subject to a Part 70 permit, there will be the additional burdens of certifying emissions annually and paying an annual emissions-based permit fee.

**Part 70 Permit Issuance Process**

The Department will undertake a technical review of the Part 70 permit application and will prepare a draft Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

The Part 70 Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft Part 70 permits. The public may also request a public hearing on the draft permit. Dockets containing a facility's permit application, supporting documents, draft Permit and Fact Sheet will be available for review both at MDE headquarters located at 1800 Washington Boulevard, Baltimore, MD and a public library near the facility's location. Please note: during Covid restrictions, the dockets will be made available on-line only at:  
<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/title5draftpermits.aspx>

## **Public Participation Process**

The initial step of the Part 70/ Title V public participation process is the publication of a notice of intent to issue a Part 70 Permit and opportunity for concerned citizens to submit written comments and/ or request a public hearing. The Department will publish the notice at least one time in the legal section of a newspaper of general circulation in the area where the facility is located. The Notice will provide the description of the facility for which a Part 70 permit has been drafted, the location of the docket which contains the application and draft permit conditions with supporting documentation, and the requirements for requesting a public hearing. The applicant is responsible for all costs incurred in the publication of this legal notice. The Department will also send notification to adjacent states, local public officials and interested parties, will include the notice in the docket at the library, and/or post the notice to the Department's website.

The public will have 30 days from the date the notice appears in the newspaper to submit written comments to the Department, or to request in writing a public hearing. Adjacent states will have 30 days from the receipt of notification to submit written comments to the Department.

A request for a public hearing must be made in writing within the 30-day comment period. Comments and hearing requests should be sent to the attention of the Air Quality Permits Program Public Participation Coordinator, Ms. Shannon Heafey via email at [Shannon.heafey@maryland.gov](mailto:Shannon.heafey@maryland.gov) or mailed to The Air and Radiation Administration, 1800 Washington Boulevard, Suite 720, Baltimore, MD 21230-1720.

## **Public Hearing**

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments submitted at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues.

If a public hearing is requested, the Department will make arrangements with the facility to schedule a hearing and will send notification of the hearing to public officials, interested parties, and the EPA. The Department will publish a notice of the scheduled hearing in the legal section of the same newspaper in which the opportunity notification appeared, at least one time and at least 30 days prior to the hearing. The notice will state the date, time, and location of the hearing. During Covid restrictions, public hearings may be held on-line. This public notice will also be posted on the MDE Air Permits Program web page.

After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

### **Citizen Petition to EPA to Object to Permit Issuance**

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

### **Applicant Objection to Permit Issuance and Recourse**

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70/Title V Operating permit, it has 15 days from receipt of the issued Permit to request a contested case hearing. More information on that can be found in 40CFR70, and COMAR 26.11.02,.03.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT  
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT  
WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING**

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by the Petroleum Fuel and Terminal Company- Erdman Avenue facility, located in Baltimore City, MD. The facility consists of six (6) bulk petroleum storage tanks equipped with internal floating roofs for the storage of gasoline or distillate products, a three (3) lane loading rack, 7 storage tanks and two (2) boilers fired by No. 2 fuel oil for space heat.

The applicant is represented by:

Mr. Bernie Sheil, Compliance Manager  
Petroleum Fuel & Terminal Company  
8325 Forsyth Boulevard  
St. Louis, MO 63105-1623

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here: <https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/title5draftpermits>

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

- 1) The name, mailing address, and telephone number of the person making the request;
- 2) The names and addresses of any other persons for whom the person making the request is representing; and
- 3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey, Title V Coordinator, Air Quality Permits Program, Air and Radiation Administration via email at [Shannon.heafey@maryland.gov](mailto:Shannon.heafey@maryland.gov).

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PART 70 OPERATING PERMIT FACT SHEET**

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**BACKGROUND**

Petroleum Fuel and Terminal (PF&T) is a bulk gasoline terminal located at 5101 Erdman Avenue in Baltimore City, Maryland, 21205. This facility is owned and operated by Petroleum Fuel and Terminal located at 2801 Rock Road, Granite City, Illinois. Petroleum Fuel and Terminal Company is a subsidiary of Apex Oil Company. Apex Oil Company purchased Petroleum Fuel and Terminal Company in September of 1994. The facility is located in Air Quality Area III, an ozone non-attainment area. The primary standard industrial classification (SIC) code for this terminal is 5171.

The major activities at the facility include storage and distribution of petroleum products including gasoline, distillates, and other refined petroleum products (diesel fuel, No. 2 fuel oil, and ethanol). The facility receives petroleum products by pipeline from Colonial Pipeline Company and a sister facility located at 1622 Clinton Street in Baltimore, Maryland. The product is stored in large closed top storage tanks and then loaded into tank trucks for distribution.

The primary sources of air emissions at the facility include six (6) bulk petroleum storage tanks (Tank Nos. 103, 104, 105, 108, 109, and 110) equipped with internal floating roofs with either primary and secondary seals or a mechanical shoe seal for the storage of gasoline or distillate product, a three (3) lane loading rack controlled by a John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU), and two (2) boilers fired by No. 2 fuel oil for space heat.

In support of the terminal operations, PF&T also maintains three (3) storage tanks containing slop and additives and four (4) storage tanks containing fuel oil.

The following table summarizes the actual emissions from PF&T based on its Annual Emission Certification Reports:

**Table 1: Actual Emissions**

Year	NO <sub>x</sub> (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2014	0.07	0.1	0.0	0.02	34.6	0.28
2015	0.08	0.2	0.0	0.02	49.6	0.43
2016	0.07	0.1	0.0	0.02	46.9	0.41
2017	0.07	0.1	0.01	0.02	46.5	0.40
2018	0.10	0.2	0.01	0.02	48.5	0.41

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The major source threshold for triggering Title V permitting requirements in Baltimore City is 25 tons per year for VOC, 25 tons for NO<sub>x</sub>, and 100 tons per year for any other criteria pollutants and 10 tons for a single hazardous air pollutant (HAP) or 25 tons per year for total HAPs. Since the actual VOC emissions from the facility are greater than the major source threshold, PF&T is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

PF&T's current Title 5 – Part 70 Operating Permit was issued September 1, 2015 and expires August 31, 2020. This renewal Title V – Part 70 Operating Permit will be issued to replace the current permit. The facility's Title V – Part 70 Operating Permit renewal application was received by the Department on August 29, 2019. An administrative completeness review was conducted and an administrative completeness letter was sent on September 25, 2019.

**CHANGES AND MODIFICATIONS TO THE TITLE V – PART 70 OPERATING PERMIT**

A permit to construct was issued to replace the internal floating roof (IFR) and seals of Tank No. 105 on June 12, 2015. Even though this permit was issued before the current Title V – Part 70 Operating Permit was issued (September 1, 2015) this change was not included in the current Title V – Part 70 Operating Permit.

Tank No. 105 is not subject to the requirements of 40 CFR, Part 60, Subpart Kb because since its installation prior to 1970, Tank No. 105 has not undergone any major modifications or reconstructions as defined in 40 CFR Part §60.14 and §60.15 and therefore, has not been constructed, reconstructed, or modified after July 11, 1973, the earliest applicability date for Subparts K, Ka, and Kb. The replacement of the internal floating roof and seals in 2015 was considered a replacement control device and also did not constitute a modification or reconstruction as defined in 40 CFR Part §60.14 and §60.15 because the modification did not cause an increase in emissions or cause a change to the service of the tank. Therefore, the IFR and seals replacement in 2015 did not cause Tank No. 105 to be subject to the requirements of 40 CFR, Part 60, Subpart K, Ka, or Kb.

A permit to construct was issued to the replace the IFR and seals on Tank No. 103 on October 21, 2015.

Tank No. 103 is subject to the requirements of the 40 CFR, Part 60, Subpart Kb and the replacement of the IFR and seals did not change the permit requirements of the tank.

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There have been no other changes at the facility since the current Title V – Part 70 Operating Permit was issued on September 1, 2015.

**NSPS and NESHAP APPLICABILITY**

**NSPS Applicability**

PF&T operates three (3) refined petroleum storage tanks primarily storing gasoline (Tank Nos. 103, 108, and 109) that are subject to the requirements of 40 CFR, Part 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. Each tank has a capacity greater than 75 cubic meters (approximately 19,800 gallons) and each tank was constructed or modified after July 23, 1984. The NSPS requirements of 40 CFR, Part 60, Subpart Kb are included in the Title V – Part 70 Operating Permit for these tanks.

PF&T is also subject to the requirements of 40 CFR, Part 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals. Subpart XX applies to loading racks constructed or modified after December 17, 1980. PF&T's loading rack was re-constructed in 1988 and a new bay (Bay No. 35) was constructed in 2005 causing the loading rack to become subject to the requirements of Subpart XX. The NSPS requirements of 40 CFR, Part 60, Subpart XX are included in the Title V – Part 70 Operating Permit.

No other NSPS regulations apply to PF&T at this time.

**NESHAP Applicability**

PF&T is a synthetic minor source with respect to HAP emissions. HAP emission limits and an operating limit are included in the Title V – Part 70 Operating Permit. As a synthetic minor source, PF&T is not subject to the major source NESHAP requirements of 40 CFR, Part 63, Subpart R for Gasoline Distribution Facilities.

PF&T is subject to the requirements of the area source NESHAP, 40 CFR, Part 63, Subpart BBBBBB for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. PF&T's terminal is considered an existing source with respect to Subpart BBBBBB because the equipment at the facility was not constructed or reconstructed, as defined in 40 CFR, Part 63, after November 9, 2006. Because PF&T is considered an existing source in accordance with 40 CFR §63.11082, PF&T was required to comply with the requirements of Subpart BBBBBB no later than January 10, 2011. The Department received PF&T's initial notification for Subpart BBBBBB on July 6, 2009 in accordance with 40 CFR §63.11093(b) and §63.9(h), and their Notification of Compliance Status Report on January 10,

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2011, in accordance with 40 CFR §63.9(h). Because PF&T has demonstrated compliance with the Initial Notification and Notification of Compliance Status requirements, there are no Subpart BBBBBB requirements included in this permit pertaining to the Initial Notification and Notification of Compliance Status.

PF&T is also subject to the requirements of 40 CFR, Part 63, Subpart JJJJJJ – Industrial, Commercial, and Institutional Boilers for the two (2) No. 2 oil fired boilers rated at 4.6 and 2.0 million Btu per hour. The Department received PF&T’s initial notification for Subpart JJJJJJ on May 5, 2015 in accordance with 40 CFR §63.11225(a)(2) and §63.9(b), and a statement confirming compliance with Subpart JJJJJJ on May 8, 2015, in accordance with 40 CFR §63.11214(b), §63.11225(a)(4), and §63.9(h). Because PF&T has demonstrated compliance with these requirements, there are no Subpart JJJJJJ requirements included in this permit pertaining to the Initial Notification or the Notification of Compliance Status.

The applicable requirements of 40 CFR, Part 63, Subparts BBBBBB and JJJJJJ are included in this Title V – Part 70 Operating Permit renewal. No other NESHAP regulations apply to PF&T at this time.

**CAM APPLICABILITY**

Compliance Assurance Monitoring (CAM), as specified in 40 CFR, Part 64, applies to any emission unit at a Title V major source that meets all of the following criteria:

- (1) The emission unit is subject to a federally enforceable emission limit or standard for a regulated pollutant.
- (2) The emission unit uses a control device to achieve compliance with any such emission limitation or standard.
- (3) The emission unit has the potential to emit pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source and must not otherwise be exempt from CAM.

The loading rack at PF&T uses a VRU to meet federally enforceable emission limits (COMAR 26.11.13.04A(1)(a) and 40 CFR §60.502(a) and (b)). The VOC emissions from the loading rack, pre-control, would be greater than the major source threshold of 25 tons per year. The loading rack is not subject to major source MACT requirements and is not otherwise exempt from CAM. A CAM plan

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is required for the loading rack and VRU and is included in Table IV-5, CAM Plan of the renewal Title V – Part 70 Operating Permit.

Each gasoline storage tank at PF&T is equipped with an internal floating roof equipped with primary and secondary seals or an equivalent system for control of VOC and HAP emissions. The storage vessels at the facility do not employ control devices as defined in 40 CFR §64.1 so that CAM requirements do not apply to the storage vessels.

**GREENHOUSE GAS (GHG) EMISSIONS**

PF&T emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from fuel burning equipment contained within the facility premises applicable to PF&T. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, the Permittee is required to quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit. Emission certifications reports for the years 2016, 2017, and 2018, showed that PF&T is not a major source (threshold: 100,000tpy CO<sub>2e</sub>) for GHG's (see Table 2 shown below).

The following table summarizes the actual emissions from PF&T based on its Annual Emission Certification Reports:

**Table 2: Greenhouse Gases Emissions Summary**

<b>GHG</b>	<b>Conversion factor</b>	<b>2016 tpy CO<sub>2e</sub></b>	<b>2017 tpy CO<sub>2e</sub></b>	<b>2018 tpy CO<sub>2e</sub></b>
Carbon dioxide CO <sub>2</sub>	1	76.5	72.5	109.9
Methane CH <sub>4</sub>	25	0.005	0.005	0.0075
Nitrous Oxide N <sub>2</sub> O	300	0.12	0.12	0.15
<b>Total GHG CO<sub>2eq</sub></b>		<b>76.6</b>	<b>72.6</b>	<b>110.1</b>

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**EMISSION UNIT IDENTIFICATION**

PF&T has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

**Table 3: Emission Unit Identification**

<b>Emissions Unit Number</b>	<b>MDE Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
EU-1	510-0677-4-0293	One (1) No. 2 fuel oil-fired boiler rated at 4.6 million BTU per hour.	1966
EU-1	510-0677-4-3049	One (1) No. 2 fuel oil-fired boiler rated at 2.0 million BTU per hour.	2000
EU-2 (Tank 103)	510-0677-9-0784	One (1) 2,982,000-gallon internal floating roof (IFR) storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.	1959; IFR with primary and secondary seals installed in 1991; replaced in 2015.
EU-3 (Tank 104)	510-0677-9-0784	One (1) 2,982,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; mechanical shoe seal installed in 1996
EU-3 (Tank 105)	510-0677-9-0784	One (1) 2,982,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; mechanical shoe seal installed in 1996; replaced in 2015.
EU-3 (Tank 110)	510-0677-9-0784	One (1) 892,500-gallon IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; IFR and seals replaced in 2010.
EU-4	510-0677-9-0784	Three-bay loading rack equipped with a John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU) (Bay Nos. 1, 2, and 35).	1949 and modified in 1982, 1988, 2002 and 2005.

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<b>Emissions Unit Number</b>	<b>MDE Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
EU-5 (Tank 108)	510-0677-9-0784	One (1) 5,000,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1994; IFR installed in 2005.
EU-5 (Tank 109)	510-0677-9-0784	One (1) 4,500,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1994; IFR installed in 2005.

**AN OVERVIEW OF THE PART 70 PERMIT**

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record

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keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE  
METHODOLOGY**

**Boilers – Emission Unit EU-1**

PF&T maintains the following boilers for space heat:

- One (1) No. 2 fuel oil-fired boiler rated at 4.6 million BTU per hour (ARA Registration No. 510-0677-4-0293).
- One (1) No. 2 fuel oil-fired boiler rated at 2.0 million BTU per hour (ARA Registration No. 510-0677-4-3049).

The average fuel oil usage for both of these boilers combined is approximately 12,000 gallons per year. The boilers are subject to general visible emissions and sulfur content requirements in COMAR 26.11.09 for fuel burning equipment and the area source HAP requirements of 40 CFR, Part 63, Subpart JJJJJJ for boilers, effective March 21, 2014.

**Applicable Regulations**

**A. Visible Emissions Limitation**

In accordance with COMAR 26.11.09.05A(2), the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

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Exceptions. In accordance with COMAR 26.11.09.05A(3), COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments, or occasional cleaning of control equipment if the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than six (6) consecutive minutes in any 60 minute period.

Compliance Demonstration

In order to comply with the visible emissions limitation, the Permittee is required to properly operate and maintain the boilers in a manner to prevent visible emissions from occurring. The Permittee shall maintain an operations manual and preventative maintenance plan for the boilers and shall maintain a log of maintenance performed that relates to combustion performance. The Permittee must also report occurrences of visible emissions as specified in permit condition 4, Section III, "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring

Boilers that burn No. 2 fuel with a rated heat input capacity of less than 10 million BTU per hour typically never have visible emissions if properly operated and maintained. Boilers in this size range are set up to operate in an automatic mode without oversight of an operator. The completion of preventative maintenance as recommended by the boiler manufacturer, focusing on combustion performance, is sufficient to maintain compliance with the no visible emissions requirement. Even though there is not a specific schedule to perform observations of the stack emissions, the Permittee is required under the general reporting requirement for excess emissions and deviations to report incidents when visible emissions are observed.

**B. Control of Sulfur Oxides**

In accordance with COMAR 26.11.09.07A(2)(b), the Permittee shall not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

Compliance Demonstration

To ensure compliance with the distillate fuel sulfur limitation of COMAR 26.11.09.07A(2)(b), PF&T is required to obtain and maintain on-site for at least five (5) years annual certifications from the fuel supplier that the fuel oil is in compliance with the 0.3 percent sulfur content by weight limitation of COMAR 26.11.09.07A(2)(b). The Permittee is required to make this certification available to the Department upon request.

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Rationale for Periodic Monitoring

Fuel supplier certifications for each shipment of fuel oil that states that the maximum sulfur content of the oil is sufficient to demonstrate that the oil contains 0.3 percent by weight sulfur or less.

**C. Control of HAP**

40 CFR, Part 63, Subpart JJJJJJ requires work practice standards, emission reduction measures, and management practices for control of HAP emissions for existing oil-fired boilers with a heat input capacity of equal to or less than 5 million BTU per hour.

Compliance Demonstration

For boilers installed on or before June 4, 2010 with a heat input capacity of equal to or less than 5 million BTU per hour, performance tune-ups are required every five (5) years (no later than 61 months after the previous tune-up). The Permittee must also operate and maintain the boiler in a manner that minimizes emissions. As previously mentioned, the Department received PF&T's initial notification for Subpart JJJJJJ on May 5, 2015 in accordance with 40 CFR §63.11225(a)(2) and §63.9(b), and a statement confirming compliance with Subpart JJJJJJ on May 8, 2015, in accordance with 40 CFR §63.11214(b), §63.11225(a)(4), and §63.9(h). PF&T must maintain records of the tune-ups and prepare a compliance report every five (5) years.

Rationale for Periodic Monitoring

40 CFR, Part 63, Subpart JJJJJJ outlines the specific performance tune-up methods, procedures, and frequency and notification, record keeping and reporting requirements applicable to the boilers to demonstrate continuous compliance with the subpart. No additional periodic monitoring is required.

**D. Operational Limitation**

The Permittee shall only burn distillate fuel oil (No. 2 fuel oil) in the boilers unless the Permittee applies for and receives an approval or permit from the Department to burn alternate fuels. **[Authority: COMAR 26.11.02.09A]**

Compliance Demonstration and Rationale for Periodic Monitoring

The Permittee is required to keep annual records of the type and amount of fuel used in the boilers. These records are required to support the emission certification report that must be submitted annually. These records are sufficient to demonstrate that only distillate fuel oil (No. 2 fuel oil) is used in the boilers.

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**Gasoline Storage Tanks – Emission Units EU-2 and EU-5**

PF&T maintains three (3) large bulk storage tanks (Tank Nos. 103, 108, and 109) each equipped with an internal floating roof with either primary and secondary seals or an equivalent system for the storage of gasoline, distillate fuels, and other refined petroleum products (diesel fuel, No. 2 fuel oil, or ethanol). The following is a description of the storage tanks included in EU-2 and EU-5 (ARA Registration No. 510-0677-4-0784):

Tank No.103: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with primary and secondary seals installed in 1959. A permit to construct was issued on May 14, 1991 for the installation of an internal floating roof with primary and secondary seals for gasoline storage. This conversion caused Tank-103 to be subject to the requirements of 40 CFR, Part 60, Subpart Kb. A permit to construct was issued October 21, 2015 to replace the IFR and seals. Tank No.103 is currently storing ethanol.

Tank No.108: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with a mechanical shoe seal.

Tank No.109: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with a mechanical shoe seal.

Tank Nos. 108 and 109 were both installed in September of 1994 and were used to store distillate fuel. The tanks were later converted to have the capability to store gasoline. PF&T received two (2) different permits to construct for this conversion on May 24, 2005 and on October 13, 2005.

Tanks Nos. 103, 108, and 109 are subject to the requirements of 40 CFR, Part 60, Subpart Kb for large VOC storage tanks constructed after July 23, 1984. Each tank has a capacity greater than 75 cubic meters (approximately 19,800 gallons) and each tank was modified after July 23, 1984 to store gasoline. These storage tanks are also subject to the requirements of COMAR 26.11.13, Control of Gasoline and Volatile Organic Compound Storage and Handling and to the requirements of 40 CFR, Part 63, Subpart BBBB for Gasoline Distribution Bulk Terminal, Bulk Plants, and Pipeline Facilities. In accordance with 40 CFR §63.11087(f), the storage tanks are deemed in compliance with 40 CFR, Part 63, Subpart BBBB if the storage tanks comply with the requirements of 40 CFR, Part 60, Subpart Kb. 40 CFR §63.11087(f) requires that the Permittee report that the storage tanks are in compliance with Subpart Kb in their Notification of Compliance Status report required under 40 CFR §63.11093(b). PF&T has

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satisfied this requirement by stating in their Notification of Compliance Status report that Tank Nos. 103, 108, and 109 are subject to the requirements of Subpart Kb.

Mechanical Shoe Seal Discussion

PF&T requested approval from the Department in a letter dated May 31, 2005 to install a mechanical shoe seal on both Tank Nos. 108 and 109 in place of primary and secondary seals. COMAR 26.11.13.03A(1)(b) states that large, closed top, gasoline storage tanks shall be equipped with an internal floating roof equipped with a primary and secondary seal, a pressure tank system that maintains a pressure at all times, or a vapor control system controlling emissions. 40 CFR, Part 60, Subpart Kb requires that each internal floating roof be equipped with either a liquid-mounted seal, a primary and secondary seal, or a mechanical shoe seal as a closure device between the wall of the storage vessel and the floating roof. Therefore, in accordance with 40 CFR §60.112b(a)(ii)(C) of Subpart Kb, the mechanical shoe seal is a permitted emission control system; however, COMAR 26.11.13.03A(1)(b) only permits the seals to be primary and secondary seals.

The Department approved the use of a mechanical shoe seal in place of the primary and secondary seal as required by COMAR 26.11.13.03A(1)(b)(i) in a letter to PF&T dated June 6, 2005. The Department approved this request based on COMAR 26.11.13.02C(2), which exempts large storage tanks equipped with a liquid mounted seal from the secondary seal requirement of COMAR 26.11.13.03A(1)(b)(i). The letter states that the Department has taken the position that a mechanical shoe seal is equivalent to a liquid mounted seal and is therefore exempt from the requirement of installing a secondary seal. The letter determines that since PF&T installed a mechanical shoe seal, the installation of a secondary seal was not necessary. Therefore, the installation of an internal floating roof equipped with a mechanical shoe seal is considered an equivalent system to an internal floating roof equipped with primary and secondary seals and satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i).

**Applicable Standards for Control of VOC and HAP**

A. Control of VOC and HAP

- (1) In accordance with COMAR 26.11.13.03A(1)(a), each tank's gauging and sampling devices shall be gas tight except when in use. **[Authority: COMAR 26.11.13.03A(1)(a)]**

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In accordance with COMAR 26.11.13.03A(1)(b), each tank shall be equipped with one of the following properly installed, operating and well maintained emission control systems:

- (a) An internal floating roof equipped with a primary and secondary seal;
- (b) A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or
- (c) A vapor control system capable of collecting the vapors from the tank and disposing of the vapors to prevent their emission to the atmosphere.

**[Authority: COMAR 26.11.13.03A(1)(b)]**

(2) In accordance with COMAR 26.11.13.03A(2), the Permittee shall meet the following seal requirements:

- (a) There shall be no visible holes, tears, or other openings in a seal or seal fabric. **[Authority: COMAR 26.11.13.03A(2)(a)]**
- (b) Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall. **[Authority: COMAR 26.11.13.03A(2)(b)]**
- (c) The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than 1/8 inch in width may not exceed 1.0 square inch per foot of tank diameter. **[Authority: COMAR 26.11.13.03A(2)(c)]**

(3) **40 CFR Part 60, Subpart Kb** which requires the Permittee to equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications:

- (a) 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

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accomplished as rapidly as possible. **[Authority: 40 CFR §60.112b(a)(1)(i)]**

(b) 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: **[Authority: 40 CFR §60.112b(a)(1)(ii)]**

(i) 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. **[Authority: 40 CFR §60.112b(a)(1)(ii)(A)]**

(ii) 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. **[Authority: 40 CFR §60.112b(a)(1)(ii)(B)]**

(iii) 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. **[Authority: 40 CFR §60.112b(a)(1)(ii)(C)]**

(c) 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. **[Authority: 40 CFR §60.112b(a)(1)(iii)]**

(d) 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

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bolted except when they are in use. **[Authority: 40 CFR §60.112b(a)(1)(iv)]**

(e) 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. **[Authority: 40 CFR §60.112b(a)(1)(v)]**

(f) 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. **[Authority: 40 CFR §60.112b(a)(1)(vi)]**

(g) 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. **[Authority: 40 CFR §60.112b(a)(1)(vii)]**

(h) 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. **[Authority: 40 CFR §60.112b(a)(1)(viii)]**

(i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. **[Authority: 40 CFR §60.112b(a)(1)(ix)]**

(4) If the gasoline storage tank is subject to, and complies with, the control requirements of 40 CFR Part 60, Subpart Kb of this chapter, the storage tank will be deemed in compliance under 40 CFR 63, Subpart BBBBBB. **[Authority: 40 CFR §63.11087(f)]**

Compliance Demonstration for Control of VOC and HAP

To comply with the requirements of COMAR 26.11.13.03A(1)(a), the Permittee shall perform an annual visual inspection of each tank's gauging and sampling devices. If a failure of a gauging or sampling device is detected during a required visual inspection, the Permittee shall repair the device or empty and remove the tank from service within 45 days. The Permittee shall maintain all records of the inspections and repairs, including the date and the action taken, on-site for at least five (5) years and shall make these records available to the Department upon request.

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Each of the three (3) storage tanks is equipped with an internal floating roof with a primary and secondary seal to comply with the requirements of COMAR 26.11.13.03A(1)(b) and 40 CFR 60.112b(a)(1)(ii). To comply with the seal requirements of COMAR 26.11.13.03A(2) the Permittee is required to conduct visual inspections of the internal floating roof and seals of each tank prior to filling and refilling the tank with volatile organic liquid as specified in 40 CFR §60.113b(a)(1). The Permittee must also perform annual external visual inspections of the roof and seals of each tank in accordance with COMAR 26.11.13.03A(3) and 40 CFR §60.113b(a)(2) and repair any defects found or empty and remove the tank from service within 45 days. In addition, the Permittee must conduct an internal inspection of each tank at least every ten (10) years, as specified in 40 CFR §60.113b(a)(4) or when an annual visual inspection shows non-compliance. The Permittee shall determine the total seal gap during each internal inspection using the procedures in COMAR 26.11.13.03A(4). Any defects must be repaired prior to refilling the storage tank with volatile organic liquid. The Permittee is required to notify the Department prior to conducting internal inspections to afford the Department the opportunity to have an observer present as specified in 40 CFR §60.113b(a)(5) and COMAR 26.11.13.03A(d).

In addition to maintaining inspection records for each tank as specified in 40 CFR §60.113b(a)(1), (2), (3) and (4), and COMAR 26.11.13.03A(3), the Permittee shall also maintain storage tank specification records as specified in 40 CFR §60.116b(a) and (b); records of the materials stored including the maximum true vapor pressure as specified in 40 CFR §60.116b(c) and (e); and the average monthly storage temperature and throughput for each tank as specified in COMAR 26.11.13.03C(3). The Permittee is required to furnish a report to the Department illustrating any defects in the tanks including the seals and internal roofs detected during the required inspections as well as any repairs made as required by 40 CFR §60.115b(a)(3) and §60.115b(a)(4).

Rationale for Periodic Monitoring

COMAR 26.11.13.03 and 40 CFR, Part 60, Subpart Kb outline specific inspection methods and procedures for demonstrating compliance with the applicable roof and seal requirements for each of the five (5) gasoline storage tanks. Subpart Kb requires both internal and external inspections periodically (after every fill and refill, every year, and every ten (10) years). In addition, the Department requires annual inspections of each tank's gauging and sampling devices to demonstrate compliance with the gas-tight device requirement. These inspections are thorough so that if there are any defects they should be detected in a timely manner without the release of significant emissions. No additional periodic monitoring is required to demonstrate compliance at this time.

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**Gasoline Storage Tanks – Emission Unit EU-3**

PF&T maintains three (3) large (greater than 40,000-gallons) closed-top petroleum storage tanks with internal floating roofs equipped with either primary or secondary seals or an equivalent system for the storage of gasoline, distillate fuel oils, or other refined petroleum products (diesel fuel, No. 2 fuel oil, or ethanol). The following is a description of the storage tanks included in EU-3 (ARA Registration No. 510-0677-4-0784):

Tank No.104: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with a mechanical shoe seal.

Tank No.105: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with a mechanical shoe seal.

Tank No.110: One (1) large (greater than 40,000-gallons) bulk storage tank equipped with an internal floating roof with primary and secondary seals. A permit to construct was issued on June 12, 2015 to the replace the IFR and seals.

These tanks are not subject to the requirements of 40 CFR, Part 60, Subpart K, Ka, or Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) because they were not constructed, reconstructed, or modified after July 11, 1973. All of these tanks were constructed prior to 1970 and have not undergone any major modifications or reconstructions as defined in 40 CFR §60.14 and §60.15 at this time. These storage tanks are subject to the requirements of COMAR 26.11.13, Control of Gasoline and Volatile Organic Compound Storage and Handling and to the requirements of 40 CFR, Part 63, Subpart BBBB for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. In most cases, the requirements of 40 CFR, Part 63, Subpart BBBB reference the requirements of 40 CFR, Part 60, Subpart Kb as applicable standards.

**40 CFR, Part 60, Subpart Kb Discussion**

Tank Nos. 104, 105, and 110 were originally installed in 1949. A permit to construct was issued on December 9, 1994 for the installation of three (3) secondary seals on existing internal floating roofs of gasoline storage tanks Nos. 104, 105, and 110 and this permit stated that these tanks were subject to Subpart Kb. However, this permit was superseded by a permit to construct issued on October 25, 1999 to clarify that Subpart Kb does not apply to these tanks since they were built in 1949 and have always had the capability to store gasoline or other volatile organic liquids. It was determined that the secondary seals were installed to comply with the requirements of COMAR 26.11.13.03

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rather than for the initial storage of gasoline. The permit issued on October 25, 1999 did not include any references or requirements associated with Subpart Kb.

A permit to construct was issued to replace the IFR and seals of Tank No. 110 on August 6, 2010. It has been determined that Tank No. 110 is not subject to the requirements of 40 CFR, Part 60, Subpart Kb because since its installation prior to 1970, Tank No. 110 has not undergone any major modifications or reconstructions as defined in 40 CFR Part §60.14 and §60.15 and therefore, has not been constructed, reconstructed, or modified after July 11, 1973, the earliest applicability date for Subparts K, Ka, and Kb. The replacement of the internal floating roof and seals in 2010 was considered a replacement control device and did not constitute a modification or reconstruction as defined in 40 CFR Part §60.14 and §60.15 because the modification did not cause an increase in emissions or cause a change to the service of the tank. The IFR and seals replacement did not cause Tank No. 110 to be subject to the requirements of 40 CFR, Part 60, Subpart K, Ka, or Kb.

Therefore, it has been determined that Tank Nos. 104, 105, and 110 are not subject to the requirements of 40 CFR, Part 60, Subpart Kb at this time.

Mechanical Shoe Seal Discussion

During an internal inspection conducted on Tank No. 104 in August of 2006 and on Tank No. 105 in November of 2006, it was determined that the primary and secondary seals were deteriorating. As a result, the primary and secondary seals were replaced with a mechanical shoe seal on Tank No. 104 in August of 2006 and on Tank No. 105 in December of 2006. As explained above, the installation of an internal floating roof equipped with a mechanical shoe seal satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i) requiring an internal floating roof equipped with a primary and secondary seal on large, closed top gasoline storage tanks.

**Applicable Standards for Control of VOC and HAP**

- A. In accordance with COMAR 26.11.13.03A(1)(a), each tank's gauging and sampling devices shall be gas tight except when in use. **[Authority: COMAR 26.11.13.03A(1)(a)]**
- B. Each of the storage tanks shall be equipped with one of the following properly installed, operating, and well maintained emission control systems:
  - 1. An internal floating roof equipped with a primary and secondary seal;

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2. A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or
3. A vapor control system capable of collecting the vapors from the tank and disposing of the vapors to prevent their emission to the atmosphere.

**[Authority: COMAR 26.11.13.03A(1)(b)]**

C. In accordance with COMAR 26.11.13.03A(2), the Permittee shall meet the following seal requirements:

1. There shall be no visible holes, tears, or other openings in the seal or seal fabric. **[Authority: COMAR 26.11.13.03A(2)(a)]**
2. Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall. **[Authority: COMAR 26.11.13.03A(2)(b)]**
3. The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than  $\frac{1}{8}$  inch in width may not exceed 1.0 square inch per foot of tank diameter. **[Authority: COMAR 26.11.13.03A(2)(c)]**

D. The Permittee shall equip each of the storage tanks with a fixed roof in combination with an internal floating roof meeting the specifications listed in 40 CFR §60.112b(a)(1)(i), §60.112b(a)(1)(ii)(A), §60.112b(a)(1)(ii)(C), and §60.112b(a)(1)(iii). This also satisfies the requirements of COMAR 26.11.13.03A(1)(b). **[Authority: 40 CFR §60.112b(a)(1), §63.11087(a), and Table 1 to 40 CFR, Part 63, Subpart BBBBBB, requirement 2(b)]**

Compliance Demonstration

As previously mentioned, the Department received PF&T's initial notification for Subpart BBBBBB on July 6, 2009 and their Notification of Compliance Status Report on January 10, 2011 so that there are no Subpart BBBBBB requirements included in this permit pertaining to the Initial Notification or the Notification of Compliance Status.

To comply with the requirements of COMAR 26.11.13.03A(1)(a), the Permittee shall perform annual visual inspections of each tank's gauging and sampling devices. If a failure of a gauging or sampling device is detected during a required visual inspection, the Permittee is required to repair the device or empty and remove the tank from service within 45 days. The Permittee shall maintain all records of the inspections and repairs, including the date and the action taken.

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Each of the three (3) storage tanks is equipped with an internal floating roof with a primary and secondary seal to comply with the requirements of COMAR 26.11.13.03A(1)(b). To comply with the seal requirements of COMAR 26.11.13.03A(2) and 40 CFR, Part 63, Subpart BBBBBB, the Permittee is required to conduct visual inspections of the internal floating roof and seals of each tank prior to filling and refilling the tank with volatile organic liquid as specified in 40 CFR §60.113b(a)(1). The Permittee must also perform annual external visual inspections of the roof and seals of each tank in accordance with COMAR 26.11.13.03A(3) and 40 CFR §60.113b(a)(2) and repair any defects found or empty and remove the tank from service within 45 days. In addition, the Permittee must conduct an internal inspection of each tank at least every ten (10) years, as specified in 40 CFR §60.113b(a)(4) or when an annual visual inspection shows non-compliance. The Permittee shall determine the total seal gap during each internal inspection using the procedures in COMAR 26.11.13.03A(4). Any defects must be repaired prior to refilling the storage tank with volatile organic liquid. The Permittee is required to notify the Department prior to conducting internal inspections to afford the Department the opportunity to have an observer present as specified in 40 CFR §60.113b(a)(5) and COMAR 26.11.13.03A(3)(d).

In addition to maintaining inspection and repair records for each tank including all repairs or replacements of the seals as specified by COMAR 26.11.13.03C(2), the Permittee shall also maintain the average monthly storage temperature and throughput for each tank as specified in COMAR 26.11.13.03C(3). The Permittee is required to furnish a report to the Department within 30 days illustrating any defects in the tanks, including the seals and internal roofs, detected during the required inspections, as well as any repairs made, as required by 40 CFR §60.115b(a)(3) and (4).

The Permittee is required to submit a semiannual compliance report that includes records of each inspection performed on each of the three (3) storage tanks. The semiannual compliance report shall also include records of any defects in the tanks, including the seals and internal roofs, that are detected during the required inspections, as well as any repairs made as specified by §60.115b(a)(2), (3), and (4).

Rationale for Periodic Monitoring

COMAR 26.11.13 and 40 CFR, Part 63, Subpart BBBBBB outline specific inspection methods and procedures for demonstrating compliance with the roof and seal requirements for each of the three (3) storage tanks. Subpart BBBBBB requires both internal and external inspections periodically (after every fill and refill, every year, and every ten (10) years). In addition, the Department requires

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annual inspections of each tank's gauging and sampling devices to demonstrate compliance with the gas-tight device requirement. These inspections are thorough so that if there are any defects they should be detected in a timely manner without the release of significant emissions. Subpart BBBB requires the submission of semiannual compliance reports detailing records of the required inspections and any noted defects. No additional periodic monitoring is necessary to demonstrate compliance at this time.

**Three Bay Loading Rack – EU-4**

PF&T maintains a three (3) bay loading rack for loading petroleum products including gasoline, distillates, and fuel ethanol. The loading rack is controlled by a John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU) and is equipped with a bottom loading system. The loading rack has three (3) bays (Bay Nos. 1, 2, and 35) and a total of nine (9) loading arms (three (3) arms on each bay). Emissions from the loading rack include fugitive emissions from truck loading and emissions from the VRU. The terminal does not own or operate any of the tank trucks transporting fuel from PF&T to other facilities.

**Permitting History**

The original loading rack control device consisting of a burner was installed in 1949. A permit to construct was issued on February 18, 1982 for a John Zink Company hydrocarbon absorption/adsorption VRU to replace the original burner. A permit to construct was issued on July 29, 1988 to reconstruct the loading rack by adding two (2) risers and loading arms and to replace six (6) existing risers. This reconstruction caused the loading rack to become subject to the federal New Source Performance Standards (NSPS) of 40 CFR, Part 60, Subpart XX, Standards of Performance for Bulk Gasoline Terminals.

A permit to construct was issued on August 8, 2002 for the installation of a John Zink carbon adsorption/absorption hydrocarbon VRU to replace the existing carbon adsorption VRU. Another permit to construct was issued on August 31, 2005 for the installation of a new gasoline loading bay (Bay No. 35).

The most recent performance test on the VRU was conducted on June 1, 2017. An emission rate of 1.7 milligrams per liter of total gasoline loaded was reported.

**Applicable Requirements**

PF&T's loading rack is subject to the requirements of 40 CFR, Part 60, Subpart XX, Standards of Performance for Bulk Gasoline Terminals, the requirements of 40 CFR, Part 63, Subpart BBBB for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. PF&T is considered an existing source with

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respect to Subpart BBBBBB because the equipment at the facility was not constructed or reconstructed after November 9, 2006.

**Applicable Standards for Control of VOC and HAP (Vapor Collection and Control Requirements)**

1. The vapor collection and control system controlling emissions from the loading system shall collect the total organic compound (TOC) vapors displaced from the cargo tanks during product loading and shall control at least 90 percent of all vapors from the loading racks. **[Authority: COMAR 26.11.13.04A(1)(a), 40 CFR §60.502(a), 40 CFR §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(a)]**
  
2. The emissions from the vapor collection and control system shall be limited to 0.29 pounds of TOC per 1,000 gallons (35 milligrams per liter) of gasoline or TOC loaded. Note: Compliance with this requirement also demonstrates compliance with the requirements of 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirements 1(b). **[Authority: COMAR 26.11.03.06C, COMAR 26.11.13.04A(1)(a)(i), 40 CFR §60.502(b), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(b)]**
  
3. The Permittee shall limit emissions from the vapor collection and control system to not more than 0.083 pounds of VOC per 1,000-gallons (10 milligrams of TOC per liter) of gasoline or TOC loaded. **[Authority: Permit to Construct No. 510-9-0088 M issued August 31, 2005]** Compliance with this requirement also provides compliance with the requirements of 40 CFR 60, Subpart XX, §60.502(b); COMAR 26.11.13.04A(1)(a)(i); and requirement 1(b) of Table 2 to 40 CFR, Part 63, Subpart BBBBBB.

Gasoline distribution facilities that are major sources of HAP emissions are subject to the National Emissions Standards for Gasoline Distribution Facilities, 40 CFR, Part 63, Subpart R, which imposes an emissions limit of 10 mg of VOC per liter of gasoline loaded for each of the facility's vapor processing systems. PF&T has accepted synthetic minor limitations for HAP emissions limiting HAP emissions to less than 10 tons per year for each individual HAP and less than 25 tons per year for the combined total of all HAP emissions as explained below in the Facility Wide Requirements to avoid being subject to the requirements of Subpart R. PF&T has also accepted a more stringent emission limitation (10 milligrams of VOC per liter of gasoline loaded) than the 35 milligrams of VOC per liter of gasoline loaded to ensure that they remain a synthetic minor source with respect to HAP emissions. To demonstrate continuous compliance with the 10 milligrams of VOC per liter of gasoline loaded

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requirement, the Permittee shall conduct performance tests on the VRU to determine the mass emission rate once every five (5) years and conduct preventative maintenance on the VRU. Compliance with the 10 milligram of VOC per liter of gasoline loaded emission limitation also provides compliance with the requirements of 40 CFR, Part 60, Subpart XX, §60.502(b); COMAR 26.11.13.04A(1)(a)(i); and requirement 1(b) of Table 2 to 40 CFR, Part 63, Subpart BBBB.

Note: The emission standard was adjusted from VOC to TOC in this permit because the standard included in 40 CFR, Part 60, Subpart XX, Part 63, Subparts R and BBBB is for TOC. COMAR 26.11.13.04A(1)(a) is the only regulation that includes the standard as VOC.

Compliance Demonstration (Vapor Collection and Control Requirements)

To comply with the requirements of COMAR 26.11.13.04A(1)(a), 40 CFR §60.502(a), and Table 2 to 40 CFR, Part 63, Subpart BBBB the loading operations are controlled by a VRU.

To demonstrate continuous compliance with the 10 milligrams per liter of gasoline loaded requirement (which will also demonstrate compliance with the 35 milligrams per liter of gasoline loaded requirements) and the 90% control efficiency requirement, the Permittee shall conduct performance tests on the VRU as specified by 40 CFR §60.503(a) – (c), COMAR 26.11.13.04A(3)(b), 40 CFR §63.11092(a)(1)(i) and (ii), and 40 CFR §63.11092(a)(2). Unless the Permittee obtains from the Department written approval to monitor and record an alternative operating parameter, during each required performance test on a VRU the Permittee is required to monitor the vacuum level, carbon activity for the carbon in each carbon bed, and measurements of carbon bed outlet VOC concentration.

PF&T is required to operate the VRU within the bounds of the CAM Plan included in Table IV-5 of the Title V – Part 70 Operating permit and within the bounds of the operating parameters established in the last performance tests. Operating the vapor processing system beyond the bounds of the determined operating parameters will constitute a violation unless corrective actions as described in the monitoring and inspection plan are followed. PF&T is also required to maintain a monitoring and inspection plan for the VRU in accordance with 40 CFR §63.11092(b)(1)(i)(B)(2)(i) through (v).

The Permittee is also required to keep records of all maintenance and repairs performed, including all replacements or additions of components

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on the VRU, and an up-to-date readily accessible copy of the monitoring and inspection plan. The Permittee shall also maintain records of all mass emission rate performance tests on the VRU and records of all preventative maintenance performed on the VRU as required by the CAM Plan. The Permittee must also maintain records of the continuous monitoring data required under 40 CFR §63.11092(b) indicating the time intervals during the loadings of gasoline cargo tanks or the operating parameter data during loadings. These records will ensure that the VRU is maintained to perform as designed.

The Permittee is to report all deviations from the CAM Plan for the VRU and all malfunction records for the VRU to the Department as a part of the semiannual compliance report. The Permittee is also required to submit an excess emissions report to the Department as a part of the semiannual compliance report.

**Rationale for Periodic Monitoring (Vapor Collection and Control Requirements)**

The vapor collection and control system is designed to meet all applicable VOC control efficiency and emission limitation requirements. The most recent performance tests conducted on the VRU demonstrated that the VOC emissions from the truck loading rack were less than the 10 milligrams per liter of gasoline loaded and the VOC control efficiency of the VOC control unit was greater than 99%. In addition to periodic performance testing, proper preventative maintenance on the VRU will ensure that the unit is operated as designed.

The VRU is monitored through a required periodic monitoring and inspection plan and the CAM Plan. Corrective actions are required for excursions from operating parameters established during the most recent performance tests. The required monitoring and inspection plan and corrective actions when necessary assure that vapors are being collected as required.

**Applicable Standards for Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

1. The Permittee shall limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in 40 CFR, Part 60, Subpart XX, §60.502(e) through (j). For the purposes of this requirement, the term “tank truck” as used in 40 CFR §60.502(e) through (j) means “cargo tank” as

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defined in 40 CFR §63.11100. **[Authority: 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(d)]**

2. The Permittee may not allow a gasoline or VOC tank truck to be filled or emptied unless the tank has been certified annually as capable of sustaining a pressure change of not more than three (3) inches of water in five (5) minutes when pressurized to a gauge pressure of 18 inches of water (4,479 kilonewtons/square meter), or evacuated to a gauge pressure of six (6) inches of water (1,493 kilonewtons/square meter) during a test according to the procedure referenced in COMAR 26.11.13.05B(2). The Permittee shall complete any needed repairs, and retest within 15 days of the original test date. **[Authority: 40 CFR §60.502(e) and COMAR 26.11.13.05(A) and (B)]**

Compliance Demonstration (Vapor Tight Tank Truck Requirements)

To comply with the gasoline tank truck leak requirements of COMAR 26.11.13.05A and 40 CFR §60.502(e), the Permittee shall ensure that loadings of gasoline or VOC into tank trucks are limited to vapor-tight gasoline tank trucks by obtaining vapor tightness documentation for each gasoline or VOC tank truck that is to be loaded at the facility. The Permittee shall verify that each gasoline tank truck loaded at the facility is a tank truck that has obtained the appropriate vapor tightness documentation within two (2) weeks after the tank truck is loaded. The Permittee shall ensure that a nonvapor-tight tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained.

The Permittee shall keep records of each tank truck's vapor tightness documentation, annual certification testing performed in accordance with 40 CFR §63.11092(f)(1), and documentation of all notifications for non-vapor-tight tank trucks. As an alternative to maintaining records of each gasoline or VOC cargo tank test results at the terminal, the Permittee may have an electronic copy of each record instantly available at the terminal or the Permittee may use a terminal automation system to prevent gasoline or VOC cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system).

The Permittee shall notify the owner or operator of each non-vapor-tight gasoline or VOC tank truck loaded at the facility within one (1) week of the documentation cross-check or three (3) weeks after the loading has occurred and shall submit to the Department copies of certification test records from the leak-tight conditions tests required under COMAR 26.11.13.04A(3)(a). The Permittee is also required to submit to the Department semiannual compliance reports that include each loading of a

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gasoline cargo tank for which vapor tightness documentation had not been previously obtained and copies of certification test records from the leak-tight conditions tests required under COMAR 26.11.13.04A(3)(a) upon request.

Rationale for Periodic Monitoring (Vapor Tight Tank Truck Requirements)  
COMAR 26.11.13, 40 CFR 60, Subpart XX, and 40 CFR 63, Subpart BBBB outline specific methods and procedures for demonstrating compliance with the vapor tight tank truck requirements. No additional periodic monitoring is necessary to demonstrate compliance.

PF&T has installed an interlock system which prevents drivers with expired vapor certifications from loading until the terminal has received updated certification.

**Applicable Standards for Control of VOC and HAP (Back Pressure and Leak Requirements)**

The vapor collection and control system and the liquid loading equipment shall be operated to control back pressure and leaks such that:

1. The gauge pressure in the delivery tank shall not exceed 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR §60.503(d). **[Authority: 40 CFR §60.502(h) and §60.503(d)]**
2. No pressure-vacuum vent in the bulk gasoline terminal's vapor collection and control system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water). **[Authority: 40 CFR §60.502(i)]**
3. During loading, the gasoline or VOC tank truck pressure does not exceed 18 inches of water, and vacuum does not exceed 6 inches of water. **[Authority: COMAR 26.11.13.04A(1)(b)(i)]**
4. There are no gasoline or VOC leaks in the system when tested by the method referenced in COMAR 26.11.13.04A(3)(a) during loading or unloading operations. **[Authority: COMAR 26.11.13.04A(1)(b)(ii)]**

Compliance Demonstration (Back Pressure and Leak Requirements)

To comply with the requirements of COMAR 26.11.13.04A(1)(b)(i) and (ii), 40 CFR §60.502(h), and 40 CFR §60.502(i) the Permittee shall conduct monthly checks on the back pressure and shall conduct monthly leak inspections of all components related to the loading rack operations during the loading of tank

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trucks as specified in the CAM Plan (Indicator 2 and 3) and 40 CFR §60.502(j). The Permittee shall conduct testing for leak-tight conditions as specified by COMAR 26.11.13.04A(3)(a). The Permittee is required to perform monthly leak inspections of all equipment in gasoline service as specified in 40 CFR §63.11089(a) and maintain monthly leak inspection records in accordance with 40 CFR §60.505(c) and §63.11094(e). The Permittee shall also record all equipment in gasoline service inspected and any leaks discovered in a log book. The Permittee is required to repair the leak within specified time frames and shall provide in the semiannual report specified in 40 CFR §63.11095(b) the reason why a repair was not feasible and the date a repair was made. The number of equipment leaks not repaired within 15 days after detection is required to be included in the semiannual compliance report which is submitted with the semiannual monitoring report.

The Permittee shall also maintain monthly records of back pressure readings in the vapor collection system during the loading of tank trucks. The Permittee shall maintain these records for at least five (5) years and shall report all deviations from the CAM Plan requirements with the semiannual monitoring report.

**Rationale for Periodic Monitoring (Back Pressure and Leak Requirements)**

The VRU and the loading rack are designed to meet the applicable pressure requirements and to be leak-tight during loading. Monthly back pressure and leak checks during loading are sufficient to demonstrate compliance with the requirements. All equipment in gasoline service is required to be identified and all equipment leaks are to be documented and repaired within a specified time frame. If leaks are not repaired within 15 days, the Department is notified.

**Applicable Standards for Control of VOC and HAP (Design and Operational Requirements)**

1. The exhaust gases from the loading rack shall vent through the VRU prior to discharging to the atmosphere. **[Authority: COMAR 26.11.03.06C]**
2. The vapor collection system shall prevent any total organic compound vapors collected at one loading rack from passing to another loading rack or lane to the atmosphere. **[Authority: 40 CFR §60.502(d), §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(c)]**
3. The Permittee shall assure that loadings of gasoline or VOC tank trucks are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system. **[Authority: 40 CFR §60.502(f)]**

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4. The Permittee shall assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline or VOC tank truck. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading rack. **[Authority: 40 CFR §60.502(g)]**
5. The Permittee shall maintain a top submerged or bottom loading system on the terminal's loading rack. **[Authority: COMAR 26.11.13.04A(1)(c)]**

Compliance Demonstration and Rationale for Periodic Monitoring (Design and Operational Requirements)

The VRU and the loading rack are designed to meet the requirements of 40 CFR §60.502(d), (f), and (g), §63.11088(a), Table 2 to 40 CFR 63, Subpart BBBBBB, requirement 1(c), and COMAR 26.11.13.04A(1)(c). Even though PF&T has already demonstrated compliance with the design standards at the time of construction, PF&T shall operate the system such that the terminal remains in compliance with these standards. Because compliance with these requirements has already been demonstrated there are no monitoring, testing, record keeping, or reporting requirements associated with these standards.

Overview of CAM Plan

The loading rack at PF&T uses a John Zink VRU which consists of two (2) carbon adsorption beds and a vacuum regeneration system. One (1) carbon adsorption bed is on-line controlling the loading rack's VOC emissions while the other carbon adsorption bed is off-line being vacuum regenerated (i.e., cleaned-up). Each bed goes through a 15-minute cycle of controlling emissions followed by a 15-minute vacuum regeneration cycle. If the VRU were to malfunction for any reason, the loading rack will automatically shut down.

The VRU is used to meet the applicable federally enforceable emission limits of COMAR 26.11.13.04A(1)(a) and 40 CFR §60.502(a) and (b). The VOC emissions from the loading rack, pre-control, would be greater than the major source threshold of 25 tons per year. The loading rack is not subject to major source MACT requirements and is not otherwise exempt from CAM.

The VRU currently meets the permitted emissions limit of 10 milligrams of VOC vented per liter of gasoline loaded at the loading rack. The performance indicators in the CAM Plan were selected to ensure a reasonable level of assurance that the emissions of VOC from the loading of gasoline and other petroleum products at the truck loading racks will comply with the emission limitations of 35 milligrams per liter of gasoline loaded and 10 milligrams per liter of gasoline loaded. During compliance tests to demonstrate compliance with the

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VOC emissions limits, the vapor collection system is checked for leaks and back pressure. PF&T performs preventative maintenance as recommended by the vendor on the VRU and routine maintenance of the vapor collection system to ensure that the VRU and vapor collection system continue to perform as designed.

**Rational for Selection of Performance Indicators in the CAM Plan for the VCU**

1. Indicator No. 1 – Carbon Bed Regeneration Vacuum

PF&T shall conduct daily visual checks of vacuum gauge and weekly observations of an entire regeneration cycle. To ensure proper long-term regeneration of a carbon bed, the vacuum pump must pull a vacuum of at least 25 inches mercury on the regenerating carbon bed during each cycle. The instantaneous maximum vacuum reading is recorded each day on each bed of the VRU and the entire regeneration cycle will be monitored weekly to ensure that the proper vacuum is maintained for the proper period of time. If readings below the desired level occur, PF&T shall investigate the unit's operation to determine if maintenance or repair is needed to prevent possible non-compliance with the mass emission limitation should the condition persist for an extended period of time. The Permittee shall manually record the weekly and daily vacuum pressure visual observations.

2. Indicator No. 2 – Equipment Leaks

Terminal operations personnel trained on the procedures to detect, record, and initiate corrective actions shall conduct a monthly leak check of the entire vapor collection system during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. Leaks of gasoline and gasoline vapors are readily detected by a person by use of sight, sound, and smell. This requirement included in the CAM Plan also satisfies the requirement of 40 CFR §60.502(j).

3. Indicator No. 3 – Vapor Line Back Pressure

The terminal operations maintenance personnel will conduct monthly checks of the back pressure on each loading bay in the collection system. An excursion is defined as when the pressure gauge indicates 18 inches of water column or greater and the truck loading is still occurring. Excessive backpressure can cause relief valves to discharge and increase fugitive emissions from leaks in the collection system.

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4. Indicator No. 4 – Preventative Maintenance

Preventative maintenance is performed four (4) times a year by a trained personnel or service person using a preventative maintenance checklist that is based on recommendations provided by the VRU manufacturer. The service persons are trained on inspection and maintenance procedures. The units are checked during each inspection to ensure that all systems are working properly and to perform any scheduled preventative maintenance based on recommendations provided by the VRU manufacturer. PF&T documents these events through manual log entries. Preventative maintenance will ensure that the control devices will continue to operate as designed and remains in good condition.

The following table contains the CAM Plan for the VRU that is included in Table IV-5 of the renewed Title V – Part 70 Operating Permit.

<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 1</b>
I. Indicator 64.4(a)(1)	Carbon Bed Regeneration Vacuum
Monitoring Approach	Vacuum gauge.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the vacuum gauge does not reach 25 inches of mercury or greater during a daily inspection or fails to hold at 25 inches or greater for at least three (3) minutes during a weekly inspection. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The vacuum gauge is located on the VRU piping, approximately two (2) feet from the shell of each carbon bed vessel. The minimum accuracy of the vacuum gauge is +/- 2.0 percent.

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B. Verification of Operational Status	Daily visual check with manual log entry.
C. QA/QC Practices and Criteria	Preventative maintenance is performed on vacuum regeneration gauge four (4) times per year and is calibrated annually.
D. Monitoring Frequency	The entire regeneration cycle will be monitored weekly. Once daily when the VRU is in operation, the vacuum pressure will be observed and recorded.
E. Data Collection	Weekly and daily visual readings when VRU is in operation with manual log entry of readings.
F. Averaging Period	None.

<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 2</b>
I. Indicator 64.4(a)(1)	Equipment Leaks
Monitoring Approach	Monthly leak check of vapor recovery system by sight, sound, and smell.
II. Indicator Range 64.4(a)(2)	An excursion is defined as detection of a leak by sight, sound, or smell. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions and corrective actions taken shall be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The terminal operations personnel will be trained on the procedures to detect leaks, record results, and initiate corrective actions.
B. Verification of Operational Status	Not Applicable.

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C. QA/QC Practices and Criteria	The operations' personnel responsible for performing the monthly inspections will be trained on the procedures to follow. The terminal will maintain a record of employees trained to perform the inspections.
D. Monitoring Frequency	Monthly.
E. Data Collection	Manual records of inspections, leaks found, and leaks repaired.
F. Averaging Period	Not Applicable.

<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 3</b>
I. Indicator 64.4(a)(1)	Vapor Collection Line Back Pressure
Monitoring Approach	Pressure gauge reading when trucks are being loaded.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the pressure gauge reading shows back pressure to be greater than 18 inches of water column. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All pressure gauge readings greater than 18 inches will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	A pressure gauge that is attached to a spool piece is inserted between the vapor line connection of the tanker and the connection for the terminal's vapor collection line measures back pressure. The gauge measures pressure within +/- 0.1 inch of water column.
B. Verification of Operational Status	Monthly visual check on each loading bay with manual log entry.

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C. QA/QC Practices and Criteria	Preventative maintenance is performed on back pressure gauge four times per year and is calibrated or replaced at least once a year.
D. Monitoring Frequency	Monthly.
E. Data Collection	Monthly reading with manual log entry.
F. Averaging Period	Not Applicable.

<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 4</b>
I. Indicator 64.4(a)(1)	Documentation of preventative maintenance.
Monitoring Approach	Proper VRU operation is verified by performing preventative maintenance as recommended by the VRU manufacturer four (4) times a year.
II. Indicator Range 64.4(a)(2)	An excursion occurs if the preventative maintenance is not performed or documented.
Reporting Threshold	All excursions will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	VRU operation verified by trained personnel or service person using a preventative maintenance checklist that is based on recommendations provided by the VRU manufacturer.
B. Verification of Operational Status	Not applicable.
C. QA/QC Practices and Criteria	Service persons are trained on inspection and maintenance procedures.
D. Monitoring Frequency	Preventative maintenance will be performed four (4) times during a calendar year.
E. Data Collection	Results of inspection and maintenance performed during

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	preventative maintenance are manually recorded and maintained on site.
F. Averaging Period	Not Applicable.

**Facility-Wide Requirements**

HAP Emissions Limitations

The major source threshold for HAPs is 10 tons per year for any single HAP or 25 tons per year for a total combination of HAPs. In addition to a gasoline throughput limitation for the loading rack, PF&T is also subject to premises wide HAP emissions limitations. The premises wide HAP emissions limitations cover emissions from the loading and storage of all fuels at the facility. The following limitations are included in the Title V – Part 70 Operating Permit to ensure that the PF&T’s total emissions will not exceed the major source thresholds for HAPs.

1. Facility wide HAP emissions shall be less than 10 tons for any single HAP and 25 tons for the total combination of HAPs in any consecutive twelve (12) month period. **[Authority: COMAR 26.11.03.06C]**
2. Gasoline throughput loaded into tank trucks shall not exceed 273 million gallons in any consecutive twelve (12) month period. **[Authority: ARA Permit to Construct No. 510-9-0088 M issued August 31, 2005]**

Compliance Demonstration and Rationale for Periodic Monitoring Strategy for Facility Wide Requirements

The Permittee has accepted synthetic minor limitations for HAP emissions limiting HAP emissions to less than 10 tons per year for each individual HAP and less than 25 tons per year for the combined total of all HAP emissions. As a synthetic minor source, PF&T is not subject to the requirements of 40 CFR, Part 63, Subpart R.

To demonstrate compliance with the HAP emissions limits, the Permittee shall, at least once per year, test or have the fuel supplier test all fuels for HAP content including individual HAP speciation amounts. In lieu of the annual testing requirement, the Permittee may demonstrate compliance with the facility wide HAP emissions limitations through the use of HAP content documentation and/or test data provided by the American Petroleum Institute, the U.S. EPA, or other sources approved by the Department. The Permittee shall maintain records to support the calculation of HAP emissions including HAP content documentation and/or test data for each consecutive twelve (12) month period. The Permittee

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shall submit these records as part of the Annual Emissions Certification that is submitted to the Department each calendar year. With the phase out of MTBE in gasoline, the HAP emissions from the terminal have decreased. Facility wide HAP emissions over the last five years average 1.54 tons per year.

A throughput limitation is included to ensure that the facility will remain a synthetic minor source for HAP emissions. PF&T has accepted a gasoline throughput limit of 273 million gallons in any consecutive twelve (12) month period. This limit was initially included in ARA Permit to Construct No. 510-9-0888 issued August 31, 2005.

In order to ensure that PF&T remains in compliance with the throughput limitation, PF&T is required to maintain monthly records to document the total gasoline throughput loaded into tank trucks at the facility for each consecutive twelve (12) month period. If PF&T exceeds the throughput limitation, PF&T is required to report incidences of excess emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

**Applicable Standards for Control of HAP**

The facility is subject to the general equipment leak requirements of 40 CFR §63.11089 included in 40 CFR, Part 63, Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

The Permittee shall, at all times, operate and maintain any affected source including associated air pollution control equipment and monitoring equipment subject to the requirements of 40 CFR, Part 63, Subpart BBBBBB, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The Department will determine whether such operation and maintenance procedures are being used based on information available to the Department which may include monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **[Authority: 40 CFR §63.111085(a)]**

**Compliance Demonstration**

The Permittee is required to perform monthly leak inspections of all equipment in gasoline service in accordance with 40 CFR §63.111089(a), and record in a log book the location of all potential leaks, the required monthly leak inspections, and detections of any leaks. A detailed description for each leak detected is required to be included in the log book. The Permittee is required to repair or replace the leaking equipment within 15 calendar days after detection of each leak. Delay of repair of leaking equipment is allowed if the repair is not feasible within 15 days

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provided the Permittee reports why the repair is not feasible and the date that each repair was completed. The Permittee must record in the log book for any leak not repaired within 15 days, the expected date of successful repair and the date of the successful leak repair.

PF&T is also required to maintain records of any malfunction of operation of the process equipment or control equipment at the facility and any corrective actions taken to minimize emissions in accordance with 40 CFR §63.11085(a).

PF&T is required to submit an excess emissions report that includes leak information and a semiannual report including the malfunctions that occurred during the reporting period and any corrective actions taken. The semiannual report and excess emissions report are to be submitted with the semiannual compliance report. The semiannual compliance report shall also include the number of leaks not repaired within 15 days of detection.

Rationale for Periodic Monitoring Strategy

PF&T is required to log detailed information about leak inspections and any leak detected in a log book and is required to submit information to the Department regarding any equipment malfunction. PF&T is also required to submit information regarding any excess emissions in a semiannual report. It is unlikely that there will be significant leaks at the facility, but in the event that there is a leak, it is required to be repaired within 15 days unless there is a delay of repair. All leak repairs that are delayed are required to be documented including the successful repair date. No additional periodic monitoring is required to demonstrate compliance with the leak requirements of 40 CFR, Part 63, Subpart BBBBBB.

---

**COMPLIANCE SCHEDULE**

PF&T is currently in compliance with all applicable air quality regulations. or Discuss compliance plan and schedule when applicable.

**TITLE IV – ACID RAIN**

Not Applicable

**TITLE VI – OZONE DEPLETING SUBSTANCES**

PF&T is not subject to Title VI requirements.

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**SECTION 112(r) – ACCIDENTAL RELEASE**

PF&T is not subject to the requirements of Section 112(r).

**PERMIT SHIELD**

PF&T did request a permit shield.

The facility requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

**INSIGNIFICANT ACTIVITIES**

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No.   1   Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

The one (1) fuel burning unit is subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and

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(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

- One (1) 1,048,026-gallon No. 1 fuel oil tank (Tank No. 101)
- One (1) 3,149,244-gallon No. 2 fuel oil tank (Tank No. 102)
- One (1) 2,205,084-gallon No. 1 fuel oil tank (Tank No. 106)
- One (1) 4,776,744-gallon No. 2 fuel oil tank (Tank No. 107)

In accordance with COMAR 26.11.02.10Q(6), tanks used exclusively for storage of numbers 1, 2, 4, 5, and 6 fuel oil are exempt from permits to construct and approvals.

(3) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 1 28,900 gallon horizontal storage tank for fuel additive (Tank No. 11)\_\_\_\_\_

No. 1 13,400 gallon horizontal storage tank for diesel lubricity additive (Tank No. 12)\_\_\_\_\_

No. 1 10,000 gallon horizontal storage tank for gasoline additive (Tank No. 13)\_\_\_\_\_

VOC emissions from the installations listed in this category are subject to either COMAR 26.11.06.06B(1)(a) or 26.11.06.06B(1)(b), depending on the date of installation.

COMAR 26.11.06.06B(1)(a) requires that the Permittee limit emissions of VOC to not more than 200 pounds per day from installations constructed before May 12, 1972 unless VOC emissions are reduced by 85 percent or more overall.

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COMAR 26.11.06.06B(1)(b) requires that the Permittee limit emissions of VOC to not more than 20 pounds per day from installations constructed on or after May 12, 1972 unless VOC emissions are reduced by 85 percent or more overall.

**STATE ONLY ENFORCEABLE REQUIREMENTS**

This section of the permit contain state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

1. Applicable Regulations:

- (A) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (B) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (C) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee’s facility during the previous calendar year. The analysis shall include either:

- (A) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (B) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

**DRAFT PERMIT**

Larry Hogan  
Governor

Ben Grumbles  
Secretary

**Air and Radiation Administration**

1800 Washington Boulevard, Suite 720  
Baltimore, MD 21230

Construction Permit

Part 70 Operating Permit

PERMIT NO.:  
24-510-0677

DATE ISSUED:  
\_\_\_\_\_

PERMIT FEE:  
To Be Paid in Accordance with  
COMAR 26.11.02.19B

EXPIRATION DATE:  
\_\_\_\_\_

**LEGAL OWNER & ADDRESS**

Petroleum Fuel & Terminal Company  
8325 Forsyth Boulevard  
St. Louis, MO 63105-1623  
Attn: Mr. Bernie Sheil, Compliance Manager

**SITE**

Petroleum Fuel & Terminal Company  
Erdman Ave.  
5101 Erdman Ave.  
Baltimore, MD 21205  
AI # 2487

**SOURCE DESCRIPTION**

One (1) bulk petroleum marketing terminal.

This source is subject to the conditions described on the attached pages.

\_\_\_\_\_  
Program Manager

\_\_\_\_\_  
Director, Air and Radiation Administration

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**SECTION I SOURCE IDENTIFICATION**

**1. DESCRIPTION OF FACILITY**

Petroleum Fuel and Terminal Company (PF&T) is a bulk gasoline terminal located at 5101 Erdman Avenue in Baltimore City, Maryland, 21205. The facility is owned and operated by Petroleum Fuel and Terminal Company located at 2801 Rock Road in Granite City, Illinois. Petroleum Fuel and Terminal Company is a subsidiary of Apex Oil Company. Apex Oil Company purchased Petroleum Fuel and Terminal Company in September of 1994. The facility is located in Air Quality Area III, an ozone non-attainment area. The primary standard industrial classification (SIC) code for this terminal is 5171.

The major activities at the facility include storage and distribution of petroleum products including gasoline, distillates, and other refined petroleum products (diesel fuel, No. 2 fuel oil, or ethanol). The facility receives petroleum products by pipeline from Colonial Pipeline Company and from a sister facility located at 1622 Clinton Street in Baltimore, Maryland. The product is stored in large closed top storage tanks and then loaded into tank trucks for distribution. The primary sources of air emissions at the facility include six (6) bulk petroleum storage tanks equipped with internal floating roofs for the storage of gasoline or distillate product, four (4) smaller fuel oil storage tanks, three (3) storage tanks containing slop and additives, a three (3) lane loading rack controlled by a John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU), and two (2) boilers fired by No. 2 fuel oil for space heat.

**2. FACILITY INVENTORY LIST**

<b>Emissions Unit Number</b>	<b>MDE Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
EU-1	510-0677-4-0293	One (1) No. 2 fuel oil-fired boiler rated at 4.6 million BTU per hour.	1966
EU-1	510-0677-4-3049	One (1) No. 2 fuel oil-fired boiler rated at 2.0 million BTU per hour.	2000
EU-2 (Tank 103)	510-0677-9-0784	One (1) 2,982,000-gallon internal floating roof (IFR) storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.	1959; IFR with primary and secondary seals installed in 1991; replaced in 2015

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<b>Emissions Unit Number</b>	<b>MDE Registration Number</b>	<b>Emissions Unit Name and Description</b>	<b>Date of Installation</b>
EU-3 (Tank 104)	510-0677-9-0784	One (1) 2,982,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; mechanical shoe seal installed in 1996
EU-3 (Tank 105)	510-0677-9-0784	One (1) 2,982,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; mechanical shoe seal installed in 1996; IFR and seals replaced in 2015.
EU-3 (Tank 110)	510-0677-9-0784	One (1) 892,500-gallon IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.	1949; secondary seal installed in 1994; IFR and seals replaced in 2010.
EU-4	510-0677-9-0784	Three-bay loading rack equipped with a John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU) (Bay Nos. 1, 2, and 35).	1949 and modified in 1982, 1988, 2002 and 2005.
EU-5 (Tank 108)	510-0677-9-0784	One (1) 5,000,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1994; IFR installed in 2005.
EU-5 (Tank 109)	510-0677-9-0784	One (1) 4,500,000-gallon IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.	1994; IFR installed in 2005.

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**SECTION II GENERAL CONDITIONS**

**1. DEFINITIONS**

**[COMAR 26.11.01.01] and [COMAR 26.11.02.01]**

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

**2. ACRONYMS**

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification

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SO <sub>2</sub>	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

**3. EFFECTIVE DATE**

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

**4. PERMIT EXPIRATION**

**[COMAR 26.11.03.13B(2)]**

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

**5. PERMIT RENEWAL**

**[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]**

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This

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information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

**6. CONFIDENTIAL INFORMATION**

**[COMAR 26.11.02.02G]**

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

**7. PERMIT ACTIONS**

**[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]**

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

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- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;
- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

**8. PERMIT AVAILABILITY**

**[COMAR 26.11.02.13G]**

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

**9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA**

**[COMAR 26.11.03.20B]**

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

**10. TRANSFER OF PERMIT**

**[COMAR 26.11.02.02E]**

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

**11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS**

**[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]**

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

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- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.
- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

**12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS**

**[COMAR 26.11.03.17]**

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

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- (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;
  - (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
  - e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
  - f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
  - g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

**13. MINOR PERMIT MODIFICATIONS**

**[COMAR 26.11.03.16]**

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:
  - (1) Does not result in a violation of any applicable requirement of the Clean Air Act;

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- (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
  - (a) Adding new requirements,
  - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
  - (c) Changing from one approved test method for a pollutant and source category to another;
- (3) Does not require or modify a:
  - (a) Case-by-case determination of a federally enforceable emissions standard,
  - (b) Source specific determination for temporary sources of ambient impacts, or
  - (c) Visibility or increment analysis;
- (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
  - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
  - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
- (5) Is not a Title I modification; and
- (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

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b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
- (2) The proposed minor permit modification;
- (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
  - (a) The proposed change meets the criteria for a minor permit modification, and
  - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
- (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
- (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
  - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.
  - (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee

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fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

**14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS**

**[COMAR 26.11.03.15]**

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
  - (1) Be in writing;
  - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
  - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
  - (1) Is a correction of a typographical error;
  - (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative

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change involving the Permittee or other matters which are not directly related to the control of air pollution;

- (3) requires more frequent monitoring or reporting by the Permittee;
  - (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
  - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
  - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
  - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
  - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
  - d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.
  - e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

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**15. OFF-PERMIT CHANGES TO THIS SOURCE**

**[COMAR 26.11.03.19]**

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
  - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
  - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
  - (3) The change is not a Title I modification; and
  - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:
  - (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
  - (2) The emissions resulting from those changes.

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- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

**16. ON-PERMIT CHANGES TO SOURCES**

**[COMAR 26.11.03.18]**

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
  - (1) The change is not a Title I modification;
  - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
  - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
  - (4) The change does not violate an applicable requirement of the Clean Air Act;
  - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

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- (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
  - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
  - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
- (1) A description of the proposed change;
  - (2) The date on which the change is proposed to be made;
  - (3) Any change in emissions resulting from the change, including the pollutants emitted;
  - (4) Any new applicable requirement of the Clean Air Act; and
  - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

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- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

**17. FEE PAYMENT**

**[COMAR 26.11.02.16A(2) & (5)(b)]**

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

**18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS**

**[COMAR 26.11.02.09.]**

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

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- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required b y (c.— g.) above.

**19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION**

**[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]**

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

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**20. PROPERTY RIGHTS**

**[COMAR 26.11.03.06E(4)]**

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

**21. SEVERABILITY**

**[COMAR 26.11.03.06A(5)]**

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

**22. INSPECTION AND ENTRY**

**[COMAR 26.11.03.06G(3)]**

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

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**23. DUTY TO PROVIDE INFORMATION**

**[COMAR 26.11.03.06E(5)]**

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

**24. COMPLIANCE REQUIREMENTS**

**[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]**

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

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Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

**25. CREDIBLE EVIDENCE**

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

**26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE**

**[COMAR 26.11.03.06E(2)]**

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

**27. CIRCUMVENTION**

**[COMAR 26.11.01.06]**

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

**28. PERMIT SHIELD**

**[COMAR 26.11.03.23]**

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

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- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

**29. ALTERNATE OPERATING SCENARIOS**

**[COMAR 26.11.03.06A(9)]**

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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**SECTION III PLANT WIDE CONDITIONS**

**1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION**

**[COMAR 26.11.06.03D]**

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

**2. OPEN BURNING**

**[COMAR 26.11.07]**

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

**3. AIR POLLUTION EPISODE**

**[COMAR 26.11.05.04]**

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

**4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS**

**[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]**

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

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- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;
- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

**5. ACCIDENTAL RELEASE PROVISIONS**

**[COMAR 26.11.03.03B(23)] and [40 CFR 68]**

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date

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specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

**6. GENERAL TESTING REQUIREMENTS**

**[COMAR 26.11.01.04]**

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

**7. EMISSIONS TEST METHODS**

**[COMAR 26.11.01.04]**

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

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**8. EMISSIONS CERTIFICATION REPORT**

**[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and  
[COMAR 26.11.02.19D]**

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
  - (1) Familiar with each source for which the certifications forms are submitted, and
  - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
  - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
  - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
  - (3) Amounts, types and analyses of all fuels used;
  - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
  - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

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- (a) Significant maintenance performed,
  - (b) Malfunctions and downtime, and
  - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

**9. COMPLIANCE CERTIFICATION REPORT**

**[COMAR 26.11.03.06G(6) and (7)]**

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
- (1) The identification of each term or condition of this permit which is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether the compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
  - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

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**10. CERTIFICATION BY RESPONSIBLE OFFICIAL**

**[COMAR 26.11.02.02F]**

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

**11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING**

**[COMAR 26.11.03.06C(5)]**

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and

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- f. The results of each analysis.

**12. GENERAL RECORDKEEPING**

**[COMAR 26.11.03.06C(6)]**

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

**13. GENERAL CONFORMITY**

**[COMAR 26.11.26.09]**

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

**14. ASBESTOS PROVISIONS**

**[40 CFR 61, Subpart M]**

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

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**15. OZONE DEPLETING REGULATIONS**

**[40 CFR 82, Subpart F]**

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

**16. ACID RAIN PERMIT**

Not applicable

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BALTIMORE, MARYLAND 21205  
DRAFT PART 70 OPERATING PERMIT NO. 24-510-0677**

**SECTION IV PLANT SPECIFIC CONDITIONS**

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

<b>Table IV – 1</b>	
<b>1.0</b>	<p><b><u>Emissions Unit Number - EU-1</u></b></p> <p>One (1) No. 2 fuel oil-fired boiler rated at 4.6 million BTU per hour (ARA Registration No. 510-0677-4-0293).</p> <p>One (1) No. 2 fuel oil-fired boiler rated at 2.0 million BTU per hour (ARA Registration No. 510-0677-4-3049).</p>
<b>1.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Visible Emissions Limitations</u> In accordance with COMAR 26.11.09.05A(2), the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.</p> <p>In accordance with COMAR 26.11.09.05A(3), COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments, or occasional cleaning of control equipment if:</p> <ol style="list-style-type: none"> <li>1. The visible emissions are not greater than 40 percent opacity; and</li> </ol>

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<b>Table IV – 1</b>	
	<p>2. The visible emissions do not occur for more than six (6) consecutive minutes in any 60 minute period.</p> <p><b>B. <u>Control of Sulfur Oxides</u></b>  In accordance with COMAR 26.11.09.07A(2)(b), the Permittee shall not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.</p> <p><b>C. <u>Control of HAP</u></b>  40 CFR, Part 63, Subpart JJJJJJ, which requires work practice standards, emission reduction measures, and management practices for control of HAP emissions for existing oil-fired boilers with a heat input capacity of equal to or less than 5 million BTU per hour.  <b>[Authority: Table 2 to Subpart JJJJJJ of Part 63 – Work Practice Standards, Emission Reduction Measures, and Management Practices]</b></p> <p><b>D. <u>Operational Limitation</u></b>  The Permittee shall only burn distillate fuel oil (No. 2 fuel oil) in the boilers unless the Permittee applies for and receives an approval or permit from the Department to burn alternate fuels. <b>[Authority: COMAR 26.11.02.09A]</b></p>
<b>1.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b>A. and B. <u>Control of Visible Emissions and Control of Sulfur Oxides</u></b>    See Monitoring, Record Keeping, and Reporting Requirements.</p> <p><b>C. <u>Control of HAP</u></b>  The Permittee must demonstrate continuous compliance by conducting performance tune-ups of the boilers. <b>[Authority: 40 CFR §63.11196(a), §63.11201(b) and (d), §63.11210(c) and (j), §63.11214(b) and Table 2, Item 12, of 40 CFR, Part 63, Subpart JJJJJJ]</b></p> <p>(1) The Permittee must conduct the tune-ups while burning distillate oil (No. 2 fuel oil). <b>[Authority: §63.11223(a)]</b></p> <p>(2) The Permittee must conduct a tune-up of each boiler every five (5) years. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. <b>[Authority: §63.11223(e)]</b></p>

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- (3) Each tune-up shall be conducted at follows:
- (a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).
  - (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
  - (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).
  - (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
  - (e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
  - (f) Maintain on-site and submit, if requested by the Department, a report containing the following information:
    - (i) The concentration of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.
    - (ii) The description of any corrective actions taken as a part of the tune-up of the boiler.

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	<p>(g) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.  <b>[Authority: §63.11223(b)]</b></p> <p>D. <u>Operational Limitation</u>  See Record Keeping and Reporting Requirements.</p>
<b>1.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Visible Emissions Limitations</u>  The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u>  The Permittee shall obtain a certificate from the fuel supplier that the fuel oil is in compliance with the 0.3 percent sulfur content by weight limitation of COMAR 26.11.09.07A(2)(b). <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of HAP</u>  At all times the Permittee must operate and maintain the boilers, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by 40 CFR, Part 63, Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that 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. <b>[Authority: 40 CFR §63.11205(a)]</b></p> <p>D. <u>Operational Limitation</u>  See Record Keeping and Reporting Requirements</p>
<b>1.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p>A. <u>Visible Emissions Limitations</u>  The Permittee shall maintain an operations manual and preventative maintenance plan for the boiler. The Permittee shall maintain a log of</p>

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maintenance performed that relates to combustion performance.

**[Authority: COMAR 26.11.03.06C]**

**B. Control of Sulfur Oxides**

The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with the 0.3 percent sulfur content by weight limitation of COMAR 26.11.09.07A(2)(b) for at least five (5) years. **[Authority: COMAR 26.11.03.06C]**

**C. Control of HAP**

The Permittee must maintain the following records:

- (1) As required in 40 CFR §63.10(b)(2)(xiv), the Permittee must keep a copy of each notification and report that the Permittee submitted to comply with 40 CFR, Part 63, Subpart JJJJJJ and all documentation supporting any Initial Notification of Notification of Compliance Status that the Permittee submitted.
- (2) The Permittee must keep records to document conformance with the work practices, emission reduction measures, and management practices required by 40 CFR §63.11214 and 40 CFR §63.11223 as follows:
  - (a) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
  - (b) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
  - (c) Records of actions taken during periods of malfunctions to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
  - (d) Records must be in a form suitable and readily available for expeditious review. The Permittee must keep each record for five (5) years following the date of each recorded action. The Permittee must keep each record on-site or be accessible from

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	<p>a central location by computer or other means that instantly provides access at the site for at least two (2) years after the date of each recorded action. The Permittee may keep the records off site for the remaining three (3) years. <b>[Authority: 40 CFR §63.11225(c) and (d)]</b></p> <p><b>D. <u>Operational Limitation</u></b> The Permittee shall keep annual fuel records for the boiler including the type of fuel and the amount burned. <b>[Authority: COMAR 26.11.02.19C and D]</b></p>
<b>1.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. <u>Visible Emissions Limitation</u></b> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”.</p> <p><b>B. <u>Control of Sulfur Oxides</u></b> The Permittee shall make annual fuel supplier certifications available to the Department upon request. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p><b>C. <u>Control of HAP</u></b> The Permittee shall submit the following notifications and reports:</p> <p>(1) The Permittee must submit all of the notifications in 40 CFR §63.7(b), §63.8(e) and (f), and §63.9(b) through (e), (g), and (h) that apply to the Permittee. <b>[Authority: 40 CFR §63.11225(a)(1)]</b></p> <p>(2) The Permittee must prepare a 5-year compliance report containing the following information:</p> <p style="margin-left: 40px;">(a) Company name and address.</p> <p style="margin-left: 40px;">(b) Statement by a responsible official, with the official’s name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR, Part 63, Subpart JJJJJJ. The notification must including the following certification of compliance, as applicable, and signed by a responsible official:</p>

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	<p style="margin-left: 40px;">(i) “This facility complies with the requirements in 40 CFR §63.11223 to conduct a 5-year tune-up of the boilers.”</p> <p style="margin-left: 40px;">(ii) “This facility complies with the requirement in 40 CFR §63.11214(d) and §63.11223(g) to minimize the boiler’s time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer’s recommended procedures or procedures specified for a boiler of similar design if manufacturer’s recommended procedures are not available.”</p> <p style="margin-left: 40px;"><b>[Authority: 40 CFR §63.11225(b)]</b></p> <p>(3) If the Permittee has switched fuels or made a physical change to the boilers and the fuel switch or change resulted in the applicability of a different subcategory within 40 CFR, Part 63, Subpart JJJJJJ, or in the boiler switching out of 40 CFR, Part 63, Subpart JJJJJJ due to a change to 100 percent natural gas, the Permittee must provide notice of the date upon which the Permittee made the change, within 30 days of the change. The notification must identify:</p> <p style="margin-left: 40px;">(a) The name of the owner or operator of the affected source, the location of the source, the boiler that was changed, and the date of the notice.</p> <p style="margin-left: 40px;">(b) The date upon which a change occurred and a description of the change.</p> <p style="margin-left: 40px;"><b>[Authority: 40 CFR §63.11225(b) and (g)]</b></p> <p><b>D. <u>Operational Limitation</u></b>        Annual fuel usage records including the type of fuel used shall be submitted with the required annual emission certification. <b>[Authority: COMAR 26.11.02.19C and D]</b></p>

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emission Unit Number: EU-1.

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<b>Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)</b>	
<b>2.0</b>	<p><b><u>Emissions Unit Numbers – EU-2 and EU-5</u></b></p> <p>Tank No. 103: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage (EU-2).</p> <p>Tank No. 108: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage (EU-5).</p> <p>Tank No. 109: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage (EU-5).</p> <p>These tanks are all registered under ARA Registration No. 510-0677-9-0784.</p>
<b>2.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) <b>COMAR 26.11.13.03A(1)(a) and (b)</b> which require that:</p> <p style="margin-left: 40px;">(a) Each tank's gauging and sampling devices be gas tight except when in use. <b>[Authority: COMAR 26.11.13.03A(1)(a)]</b></p> <p style="margin-left: 40px;">(b) Each tank be equipped with one of the following properly installed, operating, and well maintained emission control systems: <b>[Authority: COMAR 26.11.13.03A(1)(b)]</b></p> <p style="margin-left: 80px;">(i) An internal floating roof equipped with a primary and secondary seal;</p> <p style="margin-left: 80px;">(ii) A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or</p> <p style="margin-left: 80px;">(iii) A vapor control system capable of collecting the vapors from the tank and disposing of these vapors to prevent their emission to the atmosphere.</p>

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Note: The Department has determined that the installation of an internal floating roof equipped with a mechanical shoe seal satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i), which requires large, closed top gasoline storage tanks to be equipped with an internal floating roof equipped with a primary and secondary seal.

- (2) **COMAR 26.11.13.03A(2)** which requires the Permittee to meet the following seal requirements:
- (a) There shall be no visible holes, tears, or other openings in a seal or seal fabric. **[Authority: COMAR 26.11.13.03A(2)(a)]**
  - (b) Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall. **[Authority: COMAR 26.11.13.03A(2)(b)]**
  - (c) The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than 1/8 inch in width may not exceed 1.0 square inch per foot of tank diameter. **[Authority: COMAR 26.11.13.03A(2)(c)]**
- (3) **40 CFR 60, Subpart Kb** which requires the Permittee to equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications:
- (a) 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. **[Authority: 40 CFR 60.112b(a)(1)(i)]**
  - (b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel

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	<p>and the edge of the internal floating roof: <b>[Authority: 40 CFR 60.112b(a)(1)(ii)]</b></p> <p>(i) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(ii)(A)]</b></p> <p>(ii) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(ii)(B)]</b></p> <p>(iii) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(ii)(C)]</b></p> <p>(c) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(iii)]</b></p> <p>(d) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(iv)]</b></p>

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	<p>(e) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(v)]</b></p> <p>(f) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(vi)]</b></p> <p>(g) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(vii)]</b></p> <p>(h) 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. <b>[Authority: 40 CFR 60.112b(a)(1)(viii)]</b></p> <p>(i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. <b>[Authority: 40 CFR §60.112b(a)(ix)]</b></p> <p>(4) If the gasoline storage tank is subject to, and complies with, the control requirements of 40 CFR Part 60, Subpart Kb, the storage tank will be deemed in compliance under 40 CFR, Part 63, Subpart BBBBBB. <b>[Authority: 40 CFR §63.11087(f)]</b></p>
<b>2.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b><u>Control of VOC and HAP</u></b></p> <p>(1) See Monitoring, Record Keeping and Reporting Requirements.</p> <p>(2) and (3) The Permittee shall determine the total seal gap by summing the areas of the individual gaps. The lengths and widths of the gaps are measured by passing a 1/8 inch diameter probe between the seal and the tank wall and other obstructions in the tank. (The probe</p>

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	<p>should move freely without forcing or binding against the seal.)  <b>[Authority: COMAR 26.11.13.03A(4)]</b></p> <p>(4) See Monitoring, Record Keeping and Reporting Requirements.</p>
<b>2.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><b><u>Control of VOC and HAP</u></b></p> <p>(1) The Permittee shall perform an annual visual inspection of each tank's gauging and sampling devices. If a visual inspection shows noncompliance with the gas tight requirement, the Permittee shall repair the device within 45 days or empty and remove the tank from service within 45 days.</p> <p>If a repair cannot be made within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that will assure that the device will be repaired or the tank will be emptied as soon as possible.  <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(2) (3) and (4)  The Permittee shall comply with the following inspection requirements for each tank:</p> <p>(a) The Permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling or refilling the storage vessel with volatile organic liquid. If there are holes, tears or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof the Permittee shall repair the items before filling or refilling the storage vessel. <b>[Authority: 40 CFR §60.113b(a)(1)]</b></p> <p>(b) The Permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid</p>

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	<p>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 Permittee shall repair the items or empty and remove the storage vessel from service within 45 days.</p> <p>If a failure that is detected during the required inspection cannot be repaired within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that assure that the control equipment will be repaired or the tank will be emptied as soon as possible. <b>[Authority: COMAR 26.11.13.03A(3)(a) and (b), and 40 CFR §60.113b(a)(2) and (a)(3)(ii)]</b> Note: the annual inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(2) and (a)(3)(ii) satisfy the annual inspection requirements of COMAR 26.11.13.03A(3)(a) and (b).</p> <p>(c) The Permittee shall 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 Permittee shall repair the items as necessary so that none of the conditions exist before refilling the storage vessel with volatile organic liquid. The storage vessel shall be inspected within 10 years from the date of the last internal inspection. <b>[Authority: COMAR 26.11.13.03A(3)(c) and 40 CFR §60.113b(a)(4)]</b></p>
<b>2.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) The Permittee shall record the results of all visual inspections of each tank's gauging and sampling devices. The Permittee shall also</p>

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record all repairs or replacements including the date and the action taken. **[Authority: Premises Wide Permit to Construct issued on August 2, 2010]**

(2) (3) and (4)

(a) The Permittee shall keep a record of each inspection performed as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), and (a)(4) and COMAR 26.11.13.03A(3) for each storage tank. 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). **[Authority: COMAR 26.11.13.03C(1) and 40 CFR §60.115b(a)(2)]**

(b) The Permittee shall record all repairs or replacement of the seals, or internal floating roof including a detailed description of work performed and the date and the action taken for each storage tank. **[Authority: COMAR 26.11.13.03C(2)]**

(c) The Permittee shall record the average monthly storage temperature and throughout for each storage tank. **[Authority: COMAR 26.11.13.03C(3)]**

(d) The Permittee shall maintain readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel. The records shall be maintained on-site for the life of the storage vessels. **[Authority: 40 CFR §60.116b(a) and (b)]**

(e) The Permittee shall maintain records of the volatile organic liquid stored, the period of storage, and the maximum true vapor pressure of the volatile organic liquid during the respective storage period for each storage tank. The maximum true vapor pressure shall be determined using the procedures listed in 40 CFR §60.116b(e). **[Authority: 40 CFR §60.116b(c) and (e)]**

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<b>Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)</b>	
<b>2.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) Records of gauging and sampling device inspections shall be made available to the Department upon request. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(2) (3) and (4)</p> <p>(a) The Permittee shall notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR §60.113b(a)(1) and (a)(4) to afford the Department the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Department at least seven (7) days prior to the refilling of the storage vessel.</p> <p>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 Department at least fifteen (15) days prior to the refilling. <b>[Authority: 40 CFR §60.113b(a)(5) and COMAR 26.11.13.03A(3)(d)]</b></p> <p>(b) If any of the conditions described in 40 CFR §60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2), the Permittee shall furnish a report to the Department 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. <b>[Authority: 40 CFR §60.115b(a)(3)]</b></p> <p>(c) After each inspection required by 40 CFR §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 40 CFR §60.113b(a)(3)(ii), the Permittee</p>

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<b>Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)</b>	
	shall furnish a report to the Department within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. <b>[Authority: 40 CFR §60.115b(a)(4)]</b>

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emission Unit Numbers: EU-2 and EU-5.

<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
<b>3.0</b>	<p><b><u>Emissions Unit Number – EU-3</u></b></p> <p>Tank No. 104: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.</p> <p>Tank No. 105: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.</p> <p>Tank No. 110: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.</p> <p>These tanks are all registered under ARA Registration No. 510-0677-9-0784.</p>
<b>3.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) COMAR 26.11.13.03A(1)(a) and (b), which require the Permittee to meet the following equipment requirements for large, closed top storage tanks:</p> <p style="margin-left: 40px;">(a) Each tank’s gauging and sampling devices shall be gas tight except when in use. <b>[Authority: COMAR 26.11.13.03A(1)(a)]</b></p> <p style="margin-left: 40px;">(b) Each of the storage tanks shall be equipped with one of the following properly installed, operating, and well maintained emission control systems:</p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p>(i) An internal floating roof equipped with a primary and secondary seal;</p> <p>(ii) A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or</p> <p>(iii) A vapor control system capable of collecting the vapors from the tank and disposing of the vapors to prevent their emission to the atmosphere.</p> <p><b>[Authority: COMAR 26.11.13.03A(1)(b)]</b></p> <p>Note: The Department has determined that the installation of an internal floating roof equipped with a mechanical shoe seal satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i), which requires large, closed top gasoline storage tanks to be equipped with an internal floating roof equipped with a primary and secondary seal.</p> <p>(2) COMAR 26.11.13.03A(2), which requires the Permittee to meet the following seal requirements:</p> <p>(a) There shall be no visible holes, tears, or other openings in the seal or seal fabric. <b>[Authority: COMAR 26.11.13.03A(2)(a)]</b></p> <p>(b) Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall. <b>[Authority: COMAR 26.11.13.03A(2)(b)]</b></p> <p>(c) The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than <math>\frac{1}{8}</math> inch in width may not exceed 1.0 square inch per foot of tank diameter. <b>[Authority: COMAR 26.11.13.03A(2)(c)]</b></p> <p>(3) 40 CFR 60.112b(a)(1), which requires the Permittee to equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the specifications listed in 40 CFR §60.112b(a)(1)(i), §60.112b(a)(1)(ii)(A), §60.112b(a)(1)(ii)(C), and §60.112b(a)(1)(iii). <b>[Authority: 40 CFR §60.112b(a)(1), §63.11087(a), and Table 1 to 40 CFR, Part 63, Subpart BBBB, requirement 2(b)]</b></p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p>The internal floating roof shall be floating on the liquid surface (but not necessarily in complete contact with it) inside the storage vessel 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. <b>[Authority: 40 CFR §60.112b(a)(1)(i), §63.11087(a), and Table 1 to 40 CFR, Part 63, Subpart BBBBBB, requirement 2(b)]</b></p> <p>[Note: These requirements also satisfy the requirements of COMAR 26.11.13.03A(1)(b) and COMAR 26.11.13.03A(2).]</p>
<b>3.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) See Monitoring, Record Keeping, and Reporting Requirements.</p> <p>(2) During all internal tank inspections, the Permittee shall determine the total seal gap by summing the areas of the individual gaps. The lengths and widths of the gaps shall be measured by passing a 1/8 inch diameter probe between the seal and the tank wall and other obstructions in the tank. (The probe should move freely without forcing or binding against the seal). <b>[Authority: COMAR 26.11.13.03A(4)]</b></p> <p>(3) See Monitoring, Record Keeping, and Reporting Requirements.</p>
<b>3.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) The Permittee shall perform an annual visual inspection of each tank's gauging and sampling devices. If a failure of a gauging or sampling device is detected during a required visual inspection, the Permittee shall repair the device or empty and remove the tank from service within 45 days. If a repair cannot be made within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a</p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p>schedule of actions the Permittee will take that will assure that the device will be repaired or the tank will be emptied as soon as possible. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(2) and (3) The Permittee shall meet the following monitoring requirements:</p> <p>(a) The Permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal, prior to filling or refilling the storage vessel with volatile organic liquid. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the Permittee shall repair the items before filling or refilling the storage vessel. <b>[Authority: 40 CFR §60.113b(a)(1), §63.11087(c), and §63.11092(e)(1)]</b></p> <p>(b) The Permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal through manholes and roof hatches on the fixed roof at least once every twelve (12) months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days, and perform an internal inspection of the floating roof and seals. If a failure that is detected during inspections 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 Department in the inspection report required by 40 CFR §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 Permittee will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. <b>[Authority: COMAR 26.11.13.03A(3)(a), COMAR 26.11.13.03A(3)(b), 40 CFR §60.113b(a)(2), §60.113b(a)(3)(ii), §63.11087(c), and §63.11092(e)(1)]</b> Note: the annual inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(2) and (a)(3)(ii) satisfy the annual inspection requirements of COMAR 26.11.13.03A(3)(a) and (b).</p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p>(c) The Permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal, 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 Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with volatile organic liquid. The storage vessel shall be emptied, degassed, and inspected in accordance with the specifications of this paragraph at a frequency of no less than once every ten (10) years. <b>[Authority: COMAR 26.11.13.03A(3)(c), 40 CFR §60.113b(a)(3)(i), §60.113b(a)(4), §63.11087(c), and §63.11092(e)(1)]</b> Note: the internal inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(3)(i) and (a)(4) satisfy the internal inspection requirements of COMAR 26.11.13.03A(3)(c).</p>
<b>3.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) The Permittee shall record the results of all visual inspections of each tank’s gauging and sampling devices. The Permittee shall also record all repairs or replacements including the date and the action taken. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(2) and (3) The Permittee shall maintain the following records: <b>[Authority: COMAR 26.11.13.03C(4)]</b></p> <p>(a) Each inspection performed as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), and (a)(4) and COMAR 26.11.13.03A(3) for each storage tank. 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). This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a).</p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p style="text-align: center;"><b>[Authority: COMAR 26.11.13.03C(1), 40 CFR §60.115b(a)(2), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]</b></p> <p>(b) All repairs or replacement of the seals, including the date and the action taken for each storage tank. <b>[Authority: COMAR 26.11.13.03C(2)]</b></p> <p>(c) The average monthly storage temperature and throughput for each storage tank. <b>[Authority: COMAR 26.11.13.03C(3)]</b></p>
<b>3.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) Records of visual inspections of each tank’s gauging and sampling devices shall be made available to the Department upon request. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(2) and (3) The Permittee shall meet the following reporting requirements:</p> <p>(a) The Permittee shall notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(a)(1) and (a)(4) to afford the Department the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Department at least fifteen (15) 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 Department at least fifteen (15) days prior to the refilling. <b>[Authority: COMAR 26.11.13.03A(3)(d), 40 CFR §60.113b(a)(5), §63.11087(c), and §63.11092(e)(1)]</b></p> <p>(b) If any of the conditions described in 40 CFR §60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2), a report shall be furnished to the Department within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage</p>

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<b>Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)</b>	
	<p>vessel was emptied, or the nature of and date the repair was made. This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a). <b>[Authority: 40 CFR §60.115b(a)(3), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]</b></p> <p>(c) After each inspection required by 40 CFR §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 40 CFR §60.113b(a)(3)(ii), a report shall be furnished to the Department within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a). <b>[Authority: 40 CFR §60.115b(a)(4), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]</b></p> <p>(d) The Permittee shall submit to the Department semiannual compliance reports that include the following information:</p> <p>(i) Records of each inspection performed for each of the storage tanks as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), (a)(4), and COMAR 26.11.13.03A(3). <b>[Authority: 40 CFR §60.115b(a)(2), §63.11087(e), and §63.11095(a)(1)]</b></p> <p>(ii) Reports of any of the storage tanks having the defects described in 40 CFR §60.113b(a)(2) that are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2). <b>[Authority: 40 CFR §60.115b(a)(3), §63.11087(e), and §63.11095(a)(1)]</b></p> <p>(iii) Reports that find any of the storage tanks not meeting the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) during inspections required by 40 CFR §60.113b(a)(3). <b>[Authority: 40 CFR §60.115b(a)(4), §63.11087(e), and §63.11095(a)(1)]</b></p>

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emission Unit Number: EU-3.

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<b>Table IV – 4 (Truck Loading Rack)</b>	
<b>4.0</b>	<p><b><u>Emissions Unit Number – EU-4</u></b></p> <p>EU-4: One (1) three-bay loading rack for gasoline controlled by a John Zink Carbon Adsorption/Absorption Recovery Unit (Bay No. 1, 2, and 35) (ARA Registration No. 510-0677-9-0784).</p>
<b>4.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></p> <ol style="list-style-type: none"> <li>1. The vapor collection and control system controlling emissions from the loading system shall collect the total organic compound (TOC) vapors displaced from the cargo tanks during product loading and shall control at least 90 percent of all vapors from the loading racks. <b>[Authority: COMAR 26.11.13.04A(1)(a), 40 CFR §60.502(a), 40 CFR §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirement 1(a)]</b></li> <li>2. The emissions from the vapor collection and control system shall be limited to 0.29 pounds of TOC per 1,000 gallons (35 milligrams per liter) of gasoline or TOC loaded. Note: Compliance with this requirement also demonstrates compliance with the requirements of 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirements 1(b). <b>[Authority: COMAR 26.11.03.06C, COMAR 26.11.13.04A(1)(a)(i), 40 CFR §60.502(b), and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirement 1(b)]</b></li> <li>3. The Permittee shall limit emissions from the vapor collection and control system to not more than 0.083 pounds of VOC per 1,000-gallons (10 milligrams of TOC per liter) of gasoline or TOC loaded. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b> Compliance with this requirement also provides compliance with the requirements of 40 CFR 60, Subpart XX, §60.502(b); COMAR 26.11.13.04A(1)(a)(i); and requirement 1(b) of Table 2 to 40 CFR, Part 63, Subpart BBBB.</li> </ol> <p>B. <u>Control of VOC and HAP (Vapor Tight Tank Truck Requirements)</u></p> <p>The Permittee shall limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in 40 CFR, Part 60, Subpart XX, §60.502(e) through (j). For the purposes of this</p>

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**Table IV – 4 (Truck Loading Rack)**

requirement, the term “tank truck” as used in 40 CFR §60.502(e) through (j) means “cargo tank” as defined in 40 CFR §63.11100.

**[Authority: 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(d)]**

The Permittee may not allow a gasoline or VOC tank truck to be filled or emptied unless the tank has been certified annually as capable of sustaining a pressure change of not more than three (3) inches of water in five (5) minutes when pressurized to a gauge pressure of 18 inches of water (4,479 kilonewtons/square meter), or evacuated to a gauge pressure of six (6) inches of water (1,493 kilonewtons/square meter), during a test, according to the procedure referenced in COMAR 26.11.13.05B(2). The Permittee shall complete any needed repairs, and retest within 15 days of the original test date. **[Authority: 40 CFR §60.502(e) and COMAR 26.11.13.05(A) and (B)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

The vapor collection and control system and the liquid loading equipment shall be operated to control back pressure and leaks such that:

1. The gauge pressure in the delivery tank shall not exceed 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR §60.503(d). **[Authority: 40 CFR §60.502(h) and §60.503(d)]**
  
2. No pressure-vacuum vent in the bulk gasoline terminal’s vapor collection and control system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water). **[Authority: 40 CFR §60.502(i)]**
  
3. During loading, the gasoline or VOC tank truck pressure does not exceed 18 inches of water, and vacuum does not exceed 6 inches of water. **[Authority: COMAR 26.11.13.04A(1)(b)(i)]**
  
4. There are no gasoline or VOC leaks in the system when tested by the method referenced in COMAR 26.11.13.04A(3)(a) during loading or unloading operations. **[Authority: COMAR 26.11.13.04A(1)(b)(ii)]**

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<b>Table IV – 4 (Truck Loading Rack)</b>	
	<p><b>D. <u>Control of VOC and HAP (Design and Operational Requirements)</u></b></p> <ol style="list-style-type: none"> <li>1. The exhaust gases from the loading rack shall vent through the VRU prior to discharging to the atmosphere. <b>[Authority: COMAR 26.11.03.06C]</b></li> <li>2. The vapor collection system shall prevent any total organic compound vapors collected at one loading rack from passing to another loading rack or lane to the atmosphere. <b>[Authority: 40 CFR §60.502(d), §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(c)]</b></li> <li>3. The Permittee shall assure that loadings of gasoline or VOC tank trucks are made only into tanks equipped with vapor collection equipment that is compatible with the terminal’s vapor collection system. <b>[Authority: 40 CFR §60.502(f)]</b></li> <li>4. The Permittee shall assure that the terminal’s and the tank truck’s vapor collection systems are connected during each loading of a gasoline or VOC tank truck. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading rack. <b>[Authority: 40 CFR §60.502(g)]</b></li> <li>5. The Permittee shall maintain a top submerged or bottom loading system on the terminal’s loading rack. <b>[Authority: COMAR 26.11.13.04A(1)(c)]</b></li> </ol>
<b>4.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p><b>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></b></p> <ol style="list-style-type: none"> <li>1. The Permittee shall conduct performance tests on the VRU at least once every five (5) years, during the period between May 1 and September 15, to determine total organic emissions per liter of gasoline loaded at the facility and to determine an overall control efficiency for TOC emissions caused by the facility’s loading operations <b>[Authority: COMAR 26.11.13.04A(2)(a)(i) and 40 CFR §63.11092(a)]</b></li> </ol>

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**Table IV – 4 (Truck Loading Rack)**

2. The tests shall be conducted in accordance with the test methods and procedures listed in 40 CFR §63.11092(a)(1)(i) and (ii), 40 CFR §60.503(a), 40 CFR §60.503(b), 40 CFR §60.503(c), and Method 1009 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January 1991). **[Authority: COMAR 26.11.13.04A(3)(b), 40 CFR §60.503(a) through (c), 40 CFR §63.11092(a)(1)(i) and (ii), and 40 CFR §63.11092(a)(2)]**
  
3. The Permittee shall submit a Notification of Performance Test as specified in 40 CFR §63.9(e) not less than 60 days before the scheduled test date, and the notification shall contain a copy of the test protocol required under COMAR 26.11.13.04A(2)(a)(ii) and 40 CFR §63.7(c). A copy of the test results shall be submitted to the Department no later than 60 days after the test date. **[Authority: COMAR 26.11.13.04A(2)(a)(ii) and (iii), 40 CFR §63.9(e), and 40 CFR §63.11093(c)]**
  
4. Unless the Permittee obtains from the Department written approval to monitor and record an alternative operating parameter, during each required performance test on a VRU, the Permittee shall determine a monitored operating parameter value for the vapor processing system and shall continuously record the operating parameter as described below: **[Authority: 40 CFR §63.11092(b)(1), §63.11092(b)(1)(iv), §63.11092(b)(3), (4), and (5), and Indicator 1 of the CAM Plan included in Table IV-4]**
  - (a) 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.
  
  - (b) 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 40 CFR §63.14, or by another suitable procedure as recommended by the manufacturer.

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(c) Conduct monthly measurements of the carbon bed outlet VOC concentration over the last five (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.

6. For all subsequent performance tests performed after the initial performance test required under 40 CFR §63.11092(a), the Permittee shall document the reasons for any change in the operating parameter values since the previous performance test.

**[Authority: 40 CFR §63.11092(c)]**

7. Performance tests conducted shall be conducted under conditions that the Department specifies based on representative performance (i.e., performance based on normal operating conditions) of the VRU. The Permittee shall make available to the Department upon request necessary records to determine the conditions of the performance tests.

**[Authority: 40 CFR §63.11092(g)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The annual certification test for gasoline cargo tanks shall consist of the following test methods: EPA Method 27, Appendix A-8, 40 CFR Part 60 and Method 1007 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources," (January 1991) which is incorporated by reference in COMAR 26.11.01.04C.

The test shall be conducted using a time period (t) for the pressure and vacuum tests of five (5) minutes. The initial pressure ( $P_i$ ) for the pressure test shall be 18 inches of water gauge. The initial vacuum ( $V_i$ ) for the vacuum test shall be six (6) inches of water gauge. The maximum allowable pressure and vacuum changes ( $\Delta p$ ,  $\Delta v$ ) for all affected gasoline cargo tanks is three (3) inches of water, or less, in five (5) minutes.

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	<p>Any needed repairs shall be completed and the cargo tank shall be retested within 15 days of the original test date.  <b>[Authority: COMAR 26.11.13.05B, 40 CFR §63.11088(d), and §63.11092(f)(1)]</b></p> <p>C. <u>Control of VOC and HAP (Back Pressure and Leak Requirements)</u></p> <p>1. The Permittee shall test for leak-tight conditions in the vapor control system and the gasoline loading equipment during loading or unloading operations, as required in COMAR 26.11.13.04A(1)(b)(ii) each calendar month. The Permittee shall conduct the tests as prescribed in Method 1008 of the Department’s Technical Memorandum 91-01, “Test Methods and Equipment Specifications for Stationary Sources” (January 1991). <b>[Authority: COMAR 26.11.13.04A(1)(b)(ii), COMAR 26.11.13.04A(3)(a), and 40 CFR §63.11089(a)]</b></p> <p>2. At least once each calendar month the Permittee shall determine the back pressure in the vapor collection system by measuring the gauge pressure in the delivery tank during loading of the gasoline tank trucks. A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure with +/-2.5 mm of water precision, shall be calibrated and installed on the facility’s vapor collection system at a pressure tap location as close as possible to the connection with the gasoline cargo tank.  <b>[Authority: 40 CFR §60.503(d)(1), §60.502(h), and CAM Plan of Table IV-5, Indicator 3]</b></p> <p>D. <u>Control of VOC and HAP (Design and Operational Requirements)</u></p> <p>The vapor collection and control system is designed to operate as required. <b>[Authority: COMAR 26.11.02.09A]</b></p>
<b>4.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></p> <p>1. The Permittee shall calibrate, certify, operate, and maintain, according to the manufacturer’s specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to a</p>

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	<p>vapor processing system consisting of a VRU. <b>[Authority: 40 CFR §63.11092(b)]</b></p> <p>2. When the VRU is used to control emissions from a loading rack, the Permittee shall comply with the following monitoring requirements unless the Department approves alternative monitoring requirements under 40 CFR §63.8(b), §63.8(f), and 40 CFR 63 Subpart BBBB: <b>[Authority: CFR §63.8(b), §63.8(f), 40 CFR §63.11092(b)(1)(iv), and §63.11092(b)(3), (4), and (5)]</b></p> <p>(a) At least four (4) times per year, the Permittee shall perform semi-annual preventative maintenance on the VRU according to the recommendations of the manufacturer of the system or other procedures approved by the Department and as specified in the CAM Plan, Indicator 4 for the VRU. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(b) Maintain a monitoring and inspection plan that describes the Permittee’s approach for meeting the following requirements:</p> <p>(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.</p> <p>(ii) The Permittee 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.</p> <p>(iii) The Permittee shall perform semi-annual preventative 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.</p> <p>(iv) The monitoring plan shall specify conditions that would be considered malfunctions of the carbon adsorption system</p>
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during the inspections or automated monitoring performed as described in (i) through (iii) above, describe specific corrective actions that will be taken to correct any malfunction, and define what the Permittee would consider to be a timely repair for each potential malfunction.

- (v) The Permittee 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.

**[Authority: 40 CFR §63.11092(b)(1)(i)(B)(2)(i) through (v)]**

4. The Permittee shall operate the VRU in a manner not to exceed or not to go below, as appropriate, the operating parameter values for the parameters established in the last performance test and the CAM Plan included in Table IV-5. **[Authority: 40 CFR §63.11092(d)(1) and (2)]**
5. 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 40 CFR §63.11088(a), except for the following: for monitoring and inspection, as required under §63.11092(b)(1)(i)(B)(2), malfunctions that are discovered shall not constitute a violation of the emission standard in 40 CFR §63.11088(a) if corrective actions as described in the monitoring and inspection plan are followed. The Permittee must:
- (a) Initiate corrective action to determine the cause of the problem within one (1) hour.
- (b) Initiate corrective action to fix the problem within 24 hours.

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(c) Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions.

(d) Minimize periods of start-up, shutdown, or malfunction.

(e) Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem.

**[Authority: 40 CFR §63.11092(d)(3) and (4)]**

6. The Permittee shall, at all times, operate and maintain any affected source subject to the requirements of 40 CFR, Part 63, Subpart BBBBBB, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The Department will determine whether such operation and maintenance procedures are being used based on information available to the Department which may include monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

**[Authority: 40 CFR §63.11085(a)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall ensure that loadings of gasoline or VOC into tank trucks are limited to vapor-tight tank trucks using the following procedures: **[Authority: COMAR 26.11.13.05D(2), 40 CFR §60.502(e), §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(d)]**

1. The Permittee shall obtain the vapor tightness documentation specified in 40 CFR §60.505(b) and COMAR 26.11.13.05D(2) for each gasoline or VOC tank truck which is to be loaded at the facility. **[Authority: 40 CFR §60.502(e)(1) and COMAR 26.11.13.05D(2)]**

2. The Permittee shall require the tank identification number to be recorded as each gasoline or VOC tank truck is loaded at the facility. **[Authority: 40 CFR §60.502(e)(2) and COMAR 26.11.13.05D(2)]**

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3. The Permittee shall cross-check each tank identification number with the file of tank vapor tightness documentation within two (2) weeks after the corresponding tank is loaded. **[Authority: 40 CFR §60.502(e)(3)]**

(a) If less than an average of one (1) gasoline or VOC 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 **[Authority: 40 CFR §60.502(e)(3)(i)(A)]**

(b) If less than an average of one (1) gasoline or VOC tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually. **[Authority: 40 CFR §60.502(e)(3)(i)(B)]**

If either the quarterly or semiannual cross-checks reveals that these conditions were not maintained, the Permittee must return to biweekly monitoring until such time as these conditions are met again. **[Authority: 40 CFR §60.502(e)(3)(ii)]**

4. The Permittee shall take steps to assure that the nonvapor-tight tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained. **[Authority: 40 CFR §60.502(e)(5)]**

5. Alternative procedures to those described for limiting gasoline tank truck loadings (as listed in 40 CFR §60.502(e)(1) through (5)) may be approved by the Department. **[Authority: 40 CFR §60.502(e)(6)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

1. The Permittee shall conduct leak inspections each calendar month of all equipment in gasoline service, as defined in 40 CFR §63.11100, including the vapor collection systems, the vapor processing systems, and each loading rack handling gasoline or VOC. The vapor collection system, the vapor processing system, and each loading rack handling gasoline or VOC shall be inspected during the loading of tank trucks for total organic compounds liquid or vapor leaks. For these inspections, detection methods

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	<p>incorporating sight, sound, or smell are acceptable. The source of a leak shall be repaired within 15 calendar days after it is detected. <b>[Authority: 40 CFR §60.502(j), §63.11089(a), and CAM Plan, Table IV-5, Indicator 2]</b></p> <p>2. The Permittee shall use a log book to record the required monthly leak inspections. The log book shall be signed by the Permittee 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. <b>[Authority: 40 CFR §63.11089(b)]</b></p> <p>3. The Permittee shall record each detection of a liquid or vapor leak 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 five (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 if there is a delay of repair. Delay of repair of leaking equipment is allowed if the repair is not feasible within 15 days. The Permittee shall provide in the semiannual report specified in 40 CFR §63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed. <b>[Authority: 40 CFR §63.11089(c) and (d)]</b></p> <p>4. Each calendar month, the Permittee shall check the back pressure in the vapor collection system during loading of tank trucks. <b>[Authority: Indicator 3 of the CAM Plan in Table IV-5]</b></p> <p>D. <u>Control of VOC and HAP (Design and Operational Requirements)</u></p> <p>The vapor collection and control system is designed to operate as required. <b>[Authority: COMAR 26.11.02.09A]</b></p>
<b>4.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></p> <p>The Permittee shall maintain the following records for the vapor recovery collection system and VRU:</p>

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1. Records of all mass emission rate performance tests conducted on the VRU. **[Authority: COMAR 26.11.13.04A(2)(a)(iii)]**
2. Records of all maintenance and repairs performed on the VRU. **[Authority: COMAR 26.11.13.04A(2)(b)]**
3. Records of all replacements or addition of components on the VRU. **[Authority: 40 CFR §60.505(f)]**
4. An up-to-date, readily accessible record of the continuous monitoring data required under 40 CFR §63.11092(b). These records 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 these records. **[Authority: 40 CFR §63.11094(f)(1)]**
5. An up-to-date readily accessible copy of the monitoring and inspection plan required under 40 CFR §63.11092(b)(1)(i)(B)(2). **[Authority: 40 CFR §63.11094(f)(3)]**
6. An up-to-date, readily accessible record of all system malfunctions including records of the occurrence and duration of each malfunction of operation of process equipment or the air pollution control and monitoring equipment. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.11085(a), including corrective actions to restore manufacturing process and air pollution control and monitoring equipment to its normal or usual manner of operation.

As specified in §63.11092(b)(1)(i)(B)(2)(v), the Permittee 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 and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. These records 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,

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as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

**[Authority: 40 CFR §63.11094(f)(4), §63.11094(g)(1) and (2), §63.11092(b)(1)(i)(B)(2)(v), and Indicator 1 of the CAM Plan, Table IV-4]**

7. Records of all preventative maintenance as required by the CAM Plan for the VRU. **[Authority: Indicator 1 and 4 of the CAM Plan, Table IV-5]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall maintain the following records to ensure each tank truck's vapor tightness, including annual certification testing performed in accordance with 40 CFR §63.11092(f)(1) **[Authority: 40 CFR §63.11094(b) and §63.11094(b)(1)]**:

1. Records of each tank truck's vapor tightness documentation required under §60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection. **[Authority: 40 CFR §60.505(a)]**

Record of each tank truck's vapor tightness documentation file shall be updated at least once per year to reflect current test results as determined by EPA Reference Method 27. In accordance with 40 CFR §60.505(b) and COMAR 26.11.13.05D(2), this documentation shall include, as a minimum, the following information:

- (a) Test title: Gasoline Delivery Tank Pressure Test – EPA Reference Method 27 or an approved alternative method.
- (b) Tank owner and address.
- (c) Tank identification number.
- (d) Testing location.
- (e) Date of test.
- (f) Date and type of repair, if applicable.
- (g) Date of retest, if applicable.
- (h) Tester name and signature.
- (i) Witnessing inspector, if any: Name, signature, and affiliation.
- (j) Vapor tightness repair: Nature of repair work and when performed in relation to vapor tightness testing.

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(k) Test results: Actual pressure change in 5 minutes, millimeters of water (average for two (2) runs).

(l) Pressure testing: The initial and final test pressure, the time of each reading, and the actual pressure change.

(m) Vacuum testing: The initial and final test vacuum, the time of each reading, and the actual vacuum change.

(n) Number of leaks found with an instrument and leak definition.

**[Authority: COMAR 26.11.13.05D(1)(a), COMAR 26.11.13.05D(2), 40 CFR §60.505(b), §63.11088(f), and §63.11094(b)(2)]**

2. Documentation of all notifications for non-vapor-tight tank trucks as specified in 40 CFR §60.502(e)(4). **[Authority: 40 CFR §60.505(d)]**

3. As an alternative to keeping records at the terminal of each gasoline or VOC cargo tank test results as required in 40 CFR §60.505(a), (c), (d), and §63.11094(b), the Permittee may comply with one of the following requirements: **[Authority: 40 CFR §60.505(e)(1), §63.11088(f), and §63.11094(c)(1) and (2)]**

(a) An electronic copy of each record is instantly available at the terminal. **[Authority: 40 CFR §60.505(e)(1) and §63.11094(c)(1)]**

(i) The copy of each record in paragraph §60.505(e)(1) and 40 CFR §63.11094(c)(1) is an exact duplicate image of the original paper record with certifying signatures. **[Authority: 40 CFR §60.505(e)(1)(i) and §63.11094(c)(1)(i)]**

(ii) The Department is notified in writing that each terminal using this alternative is in compliance with paragraph §60.505(e)(1) and §63.11094(c)(1). **[Authority: 40 CFR §60.505(e)(1)(ii) and §63.11094(c)(1)(ii)]**

OR

(b) For facilities that utilize a terminal automation system to prevent gasoline or VOC 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 Department

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representatives during the course of a site visit, or within a mutually agreeable time frame. **[Authority: 40 CFR §60.505(e)(2) and §63.11094(c)(2)]**

(i) The copy of each record in 40 CFR §60.505(e)(2) and §63.11094(c)(2) is an exact duplicate image of the original paper record with certifying signatures. **[Authority: 40 CFR §60.505(e)(2)(i) and §63.11094(c)(2)(i)]**

(ii) The Department is notified in writing that each terminal using this alternative is in compliance with 40 CFR §60.505(e)(2) and §63.11094(c)(2). **[Authority: 40 CFR §60.505(e)(2)(ii) and §63.11094(c)(2)(ii)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

1. To demonstrate compliance with the leak detection requirements under 40 CFR §63.11089, the Permittee shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. If the Permittee elects to implement an instrument program under §63.11089, the record shall include a full description of the program. **[Authority: 40 CFR §63.11094(d)]**

2. The Permittee shall maintain monthly leak inspection records consisting of each detection of a total organic compounds liquid or vapor leak from the vapor collection system, the vapor processing system, and each loading rack handling gasoline. The inspection records shall include, as a minimum, the following information: **[Authority: 40 CFR §60.502(j), §60.505(c), and §63.11094(e)]**

- (a) Date of inspection.
- (b) The equipment type and identification number.
- (c) Findings: may indicate no leaks discovered; or location, nature of the leak (i.e., vapor or liquid), and severity of each leak.
- (d) Leak determination method (i.e., sight, sound, or smell).
- (e) The date the leak was detected, the date of each attempt to repair the leak, and reasons for any repair interval in excess of fifteen (15) days.
- (f) Repair methods applied in each attempt to repair the leak.
- (g) The expected date of successful repair of the leak if the leak is not repaired within 15 days.

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	<p>(h) The date of successful repair of the leak. (i) Inspector name and signature.</p> <p>3. The Permittee shall maintain monthly records of the back pressure readings in the vapor collection system during the loading of tank trucks. <b>[Authority: See Indicator 3 of CAM Plan, Table IV-5]</b></p> <p><b>D. <u>Control of VOC and HAP (Design and Operational Requirements)</u></b></p> <p>The vapor collection and control system is designed to operate as required. <b>[Authority: COMAR 26.11.02.09A]</b></p>
<b>4.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><b>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></b></p> <p>1. The Permittee shall report all deviations from Indicator 1 and Indicator 4 of the CAM Plan requirements as specified in the CAM Plan for the VRU. The Permittee shall submit these deviations with the semiannual monitoring report. <b>[Authority: See Indicator 1 and Indicator 4 of the CAM Plan, Table IV-5 and COMAR 26.11.03.06C]</b></p> <p>2. The Permittee shall submit an excess emissions report to the Department. The excess emissions report shall be submitted as a part of the semiannual compliance report. The excess emissions report shall include the following information: <b>[Authority: 40 CFR §63.8(c)(8), §63.11088(f), and §63.11095(b)]</b></p> <p>(a) Each instance of non-vapor-tight gasoline cargo tank loading which failed to assure that such cargo tank would not be reloaded before vapor tightness documentation was obtained.</p> <p>(b) Each reloading of a non-vapor-tight gasoline cargo tank before vapor tightness documentation is obtained in accordance with 40 CFR §63.11094(b).</p> <p>(c) Each exceedance or failure to maintain the monitored operating parameter value determined under 40 CFR §63.11092(b). The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a</p>

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description and timing of the steps taken to repair or perform maintenance on the vapor collection and processing system or the CMS.

(d) Each instance in which malfunctions discovered during the monitoring and inspections required under 40 CFR §63.11092(b)(1)(i)(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.

(e) For each occurrence of an equipment leak for which no repair attempt was made within five (5) days or for which repair was not completed within 15 days after detection:

(i) The date on which the leak was detected.

(ii) The date on each attempt to repair the leak.

(iii) The reasons for the delay of repair.

(iv) The date of successful repair.

(3) The Permittee 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 the Permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.11085(a), including actions taken to correct a malfunction. The report shall be submitted as a part of the semiannual compliance report.

**[Authority: 40 CFR §63.11088(f) and §63.11095(d)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall notify the owner or operator of each non-vapor-tight gasoline or VOC tank truck loaded at the facility within one (1) week of the documentation cross-check required by 40 CFR §60.502(e)(3), or within three (3) weeks after the loading has occurred.

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**Table IV – 4 (Truck Loading Rack)**

**[Authority: 40 CFR §60.502(e)(4), §63.11088(a), and Table 2 of 40 CFR, Part 63, Subpart BBBBBB, Item 1(d)]**

The Permittee shall submit to the Department semiannual compliance reports that include each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility. **[Authority: 40 CFR §63.11088(f), §63.11095(a), and §63.11095(a)(2)]** This report shall be submitted along with the semiannual monitoring report.

The Permittee shall submit to the Department upon request copies of certification test records from the leak-tight conditions tests required under COMAR 26.11.13.04A(3)(a). **[Authority: COMAR 26.11.13.05D(1)(b)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

The Permittee shall report all deviations from Indicators 2 and 3 of the CAM Plan requirements as specified in the CAM Plan for vapor line back pressure and equipment leaks. The Permittee shall submit these deviations with the semiannual monitoring report. **[Authority: See Indicators 2 and 3 of the CAM Plan, Table IV-4]**

The Permittee shall submit to the Department semiannual compliance reports that include the number of equipment leaks not repaired within 15 days after detection. **[Authority: 40 CFR §63.11088(f) and §63.11095(a)(3)]** These reports shall be submitted with the semiannual monitoring report.

**D. Control of VOC and HAP (Design and Operational Requirements)**

The vapor collection and control system is designed to operate as required. **[Authority: COMAR 26.11.02.09A]**

The Permittee shall submit notifications specified in 40 CFR §63.9 as applicable. **[Authority: 40 CFR §63.11087(d), §63.11093(d), and §63.9]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emission Unit EU-4.

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<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 1</b>
I. Indicator 64.4(a)(1)	Carbon Bed Regeneration Vacuum
Monitoring Approach	Vacuum gauge.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the vacuum gauge does not reach 25 inches of mercury or greater during a daily inspection or fails to hold at 25 inches or greater for at least three (3) minutes during a weekly inspection. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The vacuum gauge is located on the VRU piping, approximately two (2) feet from the shell of each carbon bed vessel. The minimum accuracy of the vacuum gauge is +/- 2.0 percent.
B. Verification of Operational Status	Daily visual check with manual log entry.
C. QA/QC Practices and Criteria	Preventative maintenance is performed on vacuum regeneration gauge four (4) times per year and is calibrated annually.
D. Monitoring Frequency	The entire regeneration cycle will be monitored weekly. Once daily when the VRU is in operation, the vacuum pressure will be observed and recorded.
E. Data Collection	Weekly and daily visual readings when the VRU is in operation with manual log entry of readings.
F. Averaging Period	None.

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<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 2</b>
I. Indicator 64.4(a)(1)	Equipment Leaks
Monitoring Approach	Monthly leak check of vapor recovery system by sight, sound, and smell.
II. Indicator Range 64.4(a)(2)	An excursion is defined as detection of a leak by sight, sound, or smell. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions and corrective actions taken shall be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The terminal operations personnel will be trained on the procedures to detect leaks, record results, and initiate corrective actions.
B. Verification of Operational Status	Not Applicable.
C. QA/QC Practices and Criteria	The operations' personnel responsible for performing the monthly inspections will be trained on the procedures to follow. The terminal will maintain a record of employees trained to perform the inspections.
D. Monitoring Frequency	Monthly.
E. Data Collection	Manual records of inspections, leaks found, and leaks repaired.
F. Averaging Period	Not Applicable.

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<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 3</b>
I. Indicator 64.4(a)(1)	Vapor Collection Line Back Pressure
Monitoring Approach	Pressure gauge reading when trucks are being loaded.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the pressure gauge reading shows back pressure to be greater than 18 inches of water column. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All pressure gauge readings greater than 18 inches will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	A pressure gauge that is attached to a spool piece is inserted between the vapor line connection of the tanker and the connection for the terminal's vapor collection line measures back pressure. The gauge measures pressure within +/- 0.1 inch of water column.
B. Verification of Operational Status	Monthly visual check on each loading bay with manual log entry.
C. QA/QC Practices and Criteria	Preventative maintenance is performed on back pressure gauge four times per year and is calibrated or replaced at least once a year.
D. Monitoring Frequency	Monthly.
E. Data Collection	Monthly reading with manual log entry.
F. Averaging Period	Not Applicable.

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<b>Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)</b>	
<b>Part 64 Requirement</b>	<b>Indicator No. 4</b>
I. Indicator 64.4(a)(1)	Documentation of preventative maintenance.
Monitoring Approach	Proper VRU operation is verified by performing preventative maintenance as recommended by the VRU manufacturer four (4) times a year.
II. Indicator Range 64.4(a)(2)	An excursion occurs if the preventative maintenance is not performed or documented.
Reporting Threshold	All excursions will be reported to the ARA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	VRU operation verified by trained personnel or service person using a preventative maintenance checklist that is based on recommendations provided by the VRU manufacturer.
B. Verification of Operational Status	Not applicable.
C. QA/QC Practices and Criteria	Service persons are trained on inspection and maintenance procedures.
D. Monitoring Frequency	Preventative maintenance will be performed four (4) times during a calendar year.
E. Data Collection	Results of inspection and maintenance performed during preventative maintenance are manually recorded and maintained on site.
F. Averaging Period	Not Applicable.

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<b>Table IV – 6 (Facility Wide Requirements)</b>	
<b>6.0</b>	<p><b><u>Emissions Unit Number(s)</u></b></p> <p>Facility Wide Requirements</p>
<b>6.1</b>	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of HAP</u></p> <p>(1) Facility wide HAP emissions shall be less than 10 tons for any single HAP and 25 tons for the total combination of HAPs in any consecutive twelve (12) month period. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(2) Gasoline throughput loaded into tank trucks shall not exceed 273 million gallons in any consecutive twelve (12) month period. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(3) The Permittee shall, at all times, operate and maintain any affected source including associated air pollution control equipment and monitoring equipment subject to the requirements of 40 CFR, Part 63, Subpart BBBB, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The Department will determine whether such operation and maintenance procedures are being used based on information available to the Department which may include monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. <b>[Authority: 40 CFR §63.11085(a)]</b></p>
<b>6.2</b>	<p><b><u>Testing Requirements:</u></b></p> <p>(1) and (2) At least once per year, the Permittee shall test or have the product supplier test all products transferred or stored at the facility for HAP content including individual HAP speciation amounts. In lieu of the annual testing requirements the Permittee may demonstrate compliance with the facility-wide HAP emissions limitations through the use of HAP content documentation and/or test data provided by the American Petroleum Institute, the U.S. EPA, or other sources approved by the Department. <b>[Authority: COMAR 26.11.03.06]</b></p>

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<b>Table IV – 6 (Facility Wide Requirements)</b>	
	(3) See Monitoring, Record Keeping, and Reporting Requirements
<b>6.3</b>	<p><b><u>Monitoring Requirements:</u></b></p> <p>(1) and (2) The Permittee shall monitor the monthly throughput of each product transferred or stored at the facility. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(3) The Permittee shall perform monthly leak inspections of all equipment in gasoline service, as defined in 40 CFR §63.11100. For these inspections, detection methods incorporating sight, sound, and smell are acceptable. <b>[Authority: 40 CFR §63.11089(a)]</b></p>
<b>6.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p>(1) and (2) The following records shall be kept on-site for at least five (5) years and shall be made available to the Department upon request:</p> <p>(a) Monthly records of facility wide total HAP emissions in tons per month and the total tons for the previous twelve (12) months. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(b) Annual HAP content test results or HAP content documentation and/or other test data from the American Petroleum Institute, the U.S. EPA, or other sources approved by the Department. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(c) The Permittee shall maintain monthly records to document that total gasoline throughput loaded into tank trucks for each consecutive twelve (12) months does not exceed 273 million gallons. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(3) The Permittee shall:</p> <p>(a) Prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service to demonstrate compliance with the leak detection requirements under 40 CFR §63.11089. If the Permittee elects to implement an instrument program under §63.11089, the record shall include a full description of the program. <b>[Authority: 40 CFR §63.11094(d)]</b></p>

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**Table IV – 6 (Facility Wide Requirements)**

- (b) Use a log book to record the required monthly leak inspections. The log book shall be signed by the Permittee 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. **[Authority: 40 CFR §63.11089(b)]**
- (c) Record each detection of a liquid or vapor leak 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 five (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 if there is a delay of repair. Delay of repair of leaking equipment is allowed if the repair is not feasible within 15 days. The Permittee shall provide in the semiannual report specified in 40 CFR §63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed. **[Authority: 40 CFR §63.11089(c) and §63.11089(d)]**
- The Permittee shall record in a log book for each leak that is detected the following information: **[Authority: 40 CFR §63.11094(e)]**
- (i) The equipment type and identification number.
  - (ii) The nature of the leak (i.e., vapor or liquid) and the method of detection (i.e., sight, sound, or smell).
  - (iii) The date the leak was detected, the date of each attempt to repair the leak, and reasons for any repair interval in excess of fifteen (15) days.
  - (iv) Repair methods applied in each attempt to repair the leak.
  - (v) The expected date of successful repair of the leak if the leak is not repaired within 15 days.
  - (vi) The date of successful repair of the leak.
- (d) Maintain records of the following for at least five (5) years and shall make available to the Department upon request:

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<b>Table IV – 6 (Facility Wide Requirements)</b>	
	<p>(i) Records of the occurrence and duration of each malfunction of operation of the process equipment or the air pollution control and monitoring equipment. <b>[Authority: 40 CFR §63.11094(g)(1)]</b></p> <p>(ii) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.11085(a), including corrective actions to restore manufacturing process and air pollution control and monitoring equipment to its normal or usual manner of operation. <b>[Authority: 40 CFR §63.11094(g)(2)]</b></p>
<b>6.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of HAP</u></p> <p>(1) The Permittee shall submit to the Department, as part of the annual Emission Certification that is submitted to the Department by April 1 of each calendar year, facility wide HAP emissions and annual HAP content test results or HAP content documentation and/or other test data from the American Petroleum Institute, the U.S. EPA, or other sources approved by the Department. <b>[Authority: COMAR 26.11.02.19C and D, and COMAR 26.11.03.06C]</b></p> <p>(2) The Permittee shall report incidences of excess emissions in accordance with permit condition 4, <u>Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”</u>. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(3) The Permittee shall:</p> <p>(a) Submit notifications specified in 40 CFR §63.9, as applicable, in accordance with 40 CFR, Part 63, Subpart BBBBBB. <b>[Authority: 40 CFR §63.9, §63.11087(d), and §63.11093(d)]</b></p> <p>(b) Submit an excess emissions report to the Department at the same time the semiannual compliance report is submitted. The excess emissions report shall include the following information:</p>

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<b>Table IV – 6 (Facility Wide Requirements)</b>	
	<p>For each occurrence of an equipment leak for which no repair attempt was made within five (5) days or for which repair was not completed within 15 days after detection:</p> <ul style="list-style-type: none"> <li>(i) The date on which the leak was detected.</li> <li>(ii) The date of each attempt to repair the leak.</li> <li>(iii) The reasons for the delay of repair.</li> <li>(iv) The date of successful repair.  <b>[Authority: 40 CFR §63.11095(b)(5)]</b></li> </ul> <p>(c) The Permittee 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 the Permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.11085(a), including actions taken to correct a malfunction. The report shall be submitted as a part of the semiannual compliance report. The number of equipment leaks not repaired within 15 days after detection shall also be included in the semiannual compliance report. <b>[Authority: 40 CFR §63.11095(a)(3) and (d)]</b></p>

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Facility Wide Requirements.

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**SECTION V    INSIGNIFICANT ACTIVITIES**

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No. 1 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

The one (1) fuel burning unit is subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

- (2) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

- One (1) 1,048,026-gallon No. 1 fuel oil tank (Tank No. 101)
- One (1) 3,149,244-gallon No. 2 fuel oil tank (Tank No. 102)
- One (1) 2,205,084-gallon No. 1 fuel oil tank (Tank No. 106)
- One (1) 4,776,744-gallon No. 2 fuel oil tank (Tank No. 107)

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In accordance with COMAR 26.11.02.10Q(6), tanks used exclusively for storage of numbers 1, 2, 4, 5, and 6 fuel oil are exempt from permits to construct and approvals.

- (3) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No.   1   28,900 gallon horizontal storage tank for fuel additive (Tank No. 11)\_\_\_\_\_

No.   1   13,400 gallon horizontal storage tank for diesel lubricity additive (Tank No. 12)\_\_\_\_\_

No.   1   10,000 gallon horizontal storage tank for gasoline additive (Tank No. 13)\_\_\_\_\_

VOC emissions from the installations listed in this category are subject to either COMAR 26.11.06.06B(1)(a) or 26.11.06.06B(1)(b), depending on the date of installation.

COMAR 26.11.06.06B(1)(a) requires that the Permittee limit emissions of VOC to not more than 200 pounds per day from installations constructed before May 12, 1972 unless VOC emissions are reduced by 85 percent or more overall.

COMAR 26.11.06.06B(1)(b) requires that the Permittee limit emissions of VOC to not more than 20 pounds per day from installations constructed on or after May 12, 1972 unless VOC emissions are reduced by 85 percent or more overall.

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**SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS**

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

- (A) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (B) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (C) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee’s facility during the previous calendar year. The analysis shall include either:

- (A) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (B) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

**Part 70 Permit Application  
for Renewal**

**Permit # 24-510-0677**

**Petroleum Fuel & Terminal Company  
5101 Erdman Avenue  
Baltimore, MD 21205**

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**Part 70 Permit Renewal Application  
Petroleum Fuel & Terminal Company  
Permit # 24-510-0677**

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**Introduction**

Petroleum Fuel & Terminal Company's (PFT) Part 70 (Title V) operating permit expires August 31, 2020. The Maryland Department of Environment (MDE) requires that a renewal application be submitted by August 31, 2019. A Part 70 permit application for renewal is included in Attachment A. PFT is requesting that a permit shield be granted.

**Summary of Changes to Emission Units**

No changes to the emission units have occurred since the issuance of the Title V permit, dated September 1, 2015. The internal floating roof (IFR) on Tanks 103 and 105 have been replaced. A Permit to Construct (PTC) was issued for both IFR replacements (See Table 1).

**Emission Units and Control Equipment**

**Emission Units Exempt from Part 70 Permit Application**

The Title V permit lists the following insignificant emissions units:

- One fuel combustion unit using gaseous fuels or # 1 or #2 fuel oil, and having a heat input less than 1 MMBtu/hr;
- Four fixed roof storage tanks (Tanks 27-101, 56-106, 80-102, and 120-07) utilized for the storage of Numbers 1, 2, 4, 5 and 6 fuel oil or aviation jet fuel; and
- Three storage tanks (Tanks 11, 12, and 13) with a potential to emit air pollutants at levels less than the "de minimus" as listed in COMAR 26.11.02.10X.

No change to the insignificant emissions units has occurred. The above-referenced insignificant emissions units are identified in the Insignificant Emissions Check-Off List of the Part 70 application (see Attachment A).

**Part 70 Permit Renewal Application  
Petroleum Fuel & Terminal Company  
Permit # 24-510-0677**

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**Emission Units Included in Part 70 Permit Renewal Application**

The Facility Inventory List of the Title V Permit includes the following emission units which are included in the renewal application.

<b>Table 1 Emission Units Included in Part 70 Permit Renewal Application</b>				
<b>Permit ID Number (Facility ID)</b>	<b>Emission Unit Type</b>	<b>Emission Unit Description</b>	<b>Date of Installation</b>	<b>ARMA Registration Number</b>
EU-1	Boiler	# 2 Fuel Oil-Fired Boiler with heat input of 4.6 MBtu/hr	1966	510-0677-4-0293
EU-1	Boiler	# 2 Fuel Oil-Fired Boiler with heat input of 4.6 MBtu/hr	1966	510-0677-4-0293
EU-2 (Tank 103)	Gasoline Storage Tank	2,982,000 gallon tank equipped with an internal floating roof	1959	510-0677-9-0784 A PTC was issued (September 2015) for IFR replacement.
EU-3 (Tank 104)	Gasoline Storage Tank	2,982,000 gallon tank equipped with an internal floating roof	1949	510-0677-9-0784
EU-3 (Tank 105)	Gasoline Storage Tank	2,982,000 gallon tank equipped with an internal floating roof	1949	510-0677-9-0784 A PTC was issued (6/12/15) for IFR replacement.
EU-3 (Tank 110)	Gasoline Storage Tank	892,500 gallon tank equipped with an internal floating roof	1949	510-0677-9-0784
EU-4	Gasoline Truck Loading Rack	8-bay loading rack with bays B & H utilized for gasoline loading.	1958	510-0677-9-0784
EU-5 (Tank 108)	Gasoline Storage Tank	5,000,000 gallon tank equipped with an internal floating roof	1994	510-0677-9-0784
EU-5 (Tank 109)	Gasoline Storage Tank	4,500,000 gallon tank equipped with an internal floating roof	1994	510-0677-9-0784

**Part 70 Permit Renewal Application  
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**Potential Emissions**

Section 5 of the application is requesting a summary of potential emissions. Information on the emission calculation process follows.

**Boilers**

Emissions from the boilers are based on a maximum fuel throughput of 12,000 gallons/year for both boilers. Emissions were calculated using the Illinois EPA emission calculator and summarized in the following table.

<b>Table 2 -Emissions from Boilers</b>					
<b>Pollutant</b>	<b>CO</b>	<b>NOx</b>	<b>PM</b>	<b>SO2</b>	<b>VOM</b>
Emissions (tons/yr)	0.03	0.12	0.012	0.256	0.0015

The printout sheet from the Illinois EPA emission calculator pertaining to the boiler emissions is included in Attachment B.

**IFR Storage Tanks**

**Working and Breathing Losses**

TANKS 4.09d software program is being used to calculate VOC emissions from the internal floating roof (IFR) storage tanks. Potential emissions based on gasoline RVP 15 and 24 tank turnovers per year. Tanks Reports are included in Attachment B. Table 2 summarizes the VOC emissions from the tanks.

**Roof Landing Losses**

Roof landing losses are being calculated using AP-42, Chapter 7.1.3.2.2. Losses are based on each roof landing event occurring over two days, and two landing events per year. Emission Worksheets are included in Attachment B.

<b>Table 3 - VOC Emissions from IFR Storage Tank</b>			
<b>Tank ID</b>	<b>Working &amp; Breathing Losses (tons/yr)</b>	<b>Roof Landing Losses (tons/yr)</b>	<b>Total Losses (tons/yr)</b>
Tank 103 (EU-2)	2.17	4.56	6.73
Tank 104 (EU-3)	5.80	6.42	12.22
Tank 105 (EU-3)	5.80	6.42	12.22
Tank 108 (EU-5)	6.94	7.82	14.76
Tank 109(EU-5)	6.62	7.18	13.80
Tank 110 (EU-3)	1.50	1.02	2.52
<b>Total</b>	<b>28.83</b>	<b>33.42</b>	<b>62.25</b>

# Part 70 Permit Renewal Application

## Petroleum Fuel & Terminal Company

### Permit # 24-510-0677

#### Hazardous Air Pollutant (HAP) Emissions

Hazardous air pollutant (HAP) emissions from the storages tanks are detailed in Table 4.

<b>Table 4- HAP Emissions from IFR Storage Tanks</b>				
HAP Constituent	CAS Number	Percentage by Weight in Normal Gasoline Vapors (Note 1)	Calculation	HAP Emissions (tons/yr)
Benzene	8006-61-9	0.9	0.009 x 62.25 tons/yr	0.56
Ethylbenzene	100-41-4	0.1	0.001 x 62.25 tons/yr	0.07
n-Hexane	110-54-3	1.6	0.016 x 62.25 tons/yr	1.00
Toluene	108-88-3	1.3	0.013 x 62.25 tons/yr	0.81
2,2,4-Trimethylpentane	540-84-1	0.8	0.008 x 62.25 tons/yr	0.50
Xylenes	095-47-6	0.5	0.005 x 62.25 tons/yr	0.31
<b>Total HAPS</b>		<b>5.2</b>		<b>3.25</b>

Note 1: Using EPA document # EPA-453/R-94-002a, January 1994, Gasoline Distribution Industry (Stage 1) - Background Information for Proposed Standards, Appendix C, Calculation of HAP Vapor Profiles for Gasoline. Using weight by percentage for "normal gasoline" as listed in Table C-5. Calculated using VOC emission total.

#### **Truck Rack**

The truck rack identified as emission unit EU-4. An Emission Worksheet detailing VOC and HAP emissions from the VCU and fugitive emissions from the truck rack is included in Attachment B.

#### **Fugitive Emissions from Equipment Components**

An Emission Worksheet detailing fugitive VOC emissions from equipment components in gasoline service is included in Attachment B. HAP emissions are detailed in Table 5.

<b>Table 5- HAP Emissions from Equipment Components</b>				
HAP Constituent	CAS Number	Percentage by Weight in Normal Gasoline Vapors (Note 1)	Calculation	HAP Emissions (tons/yr)
Benzene	8006-61-9	0.9	0.009 x 0.21 tons/yr	0.0019
Ethylbenzene	100-41-4	0.1	0.001 x 0.21 tons/yr	0.0002
n-Hexane	110-54-3	1.6	0.016 x 0.21 tons/yr	0.0034
Toluene	108-88-3	1.3	0.013 x 0.21 tons/yr	0.0027
2,2,4-Trimethylpentane	540-84-1	0.8	0.008 x 0.21 tons/yr	0.0017
Xylenes	095-47-6	0.5	0.005 x 0.21 tons/yr	0.001
<b>Total HAPS</b>		<b>5.2</b>		<b>0.0109</b>

"normal gasoline" as listed in Table C-5. Calculated using VOC emission total.

**Part 70 Permit Renewal Application  
Petroleum Fuel & Terminal Company  
Permit # 24-510-0677**

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**Source-Wide Emissions**

<b>Emission Unit</b>	<b>VOC</b>	<b>HAP</b>	<b>CO</b>	<b>NOx</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
Boilers	0.002		0.03	0.12	0.256	0.006
Tanks	62.25	3.25				
Truck Rack	72.0	3.16				
Equipment Components	0.211	0.011				
<b>Total</b>	<b>134.463</b>	<b>6.421</b>	<b>0.03</b>	<b>0.12</b>	<b>0.256</b>	<b>0.006</b>

**Compliance Assurance Monitoring (CAM) Plan**

The CAM Plan (Table IV-5) from the Title V Air Permit for the VRU is included in Attachment A of the permit renewal application.

# **Attachment A**

## **Table of Contents**

Permit Cover Page  
Section 1 – Certification Statements  
Section 2 – Facility Description Summary  
Section 3A to 3E – Emission Unit EU-1  
Table IV-1  
Section 3A to 3E – Emission Unit EU-2  
Table IV-2  
Section 3A to 3E – Emission Unit EU-3  
Table IV-3  
Section 3A to 3E – Emission Unit EU-4  
Table IV-4  
Section 4 – Control Equipment Unit EU-4  
Section 3A to 3E – Emission Unit EU-5  
Section 5 – Summary Sheet of Potential Emissions  
Section 6 – Exemptions  
Section 7 – Noncomplying Emission Units  
State-Only Enforceable Requirements  
Section VI of Part 70 Permit  
Insignificant Activities Form  
CAM Plan (Table IV-5 of Part 70 Permit)  
Process Flow Diagram  
Plot Plan  
2018 Emission Certification Report  
Application Completeness Checklist

**PART 70 PERMIT APPLICATION FOR RENEWAL  
AIR AND RADIATION MANAGEMENT ADMINISTRATION**

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: Petroleum Fuel & Terminal Company		
Street Address: 8235 Forsyth Blvd., Suite 400		
City: Clayton	State: MO	Zip Code: 63105
Telephone Number: 314-889-9652	Fax Number	

Facility Information:

Name of Facility: Petroleum Fuel & Terminal Company		
Street Address: 510 Erdman Avenue		
City: Baltimore	State: MD	Zip Code: 21205
Plant Manager: Jack Weinhold	Telephone Number: 410-327-3808	Fax Number: 410-732-7551
24-Hour Emergency Telephone Number for Air Pollution Matters: 410-354-1570		

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.



SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under \_112(r) of the Clean Air Act:

has been submitted;

will be submitted at a future date; or

does not need to be submitted.



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:

X \_\_\_\_\_

SIGNATURE

DATE

PRINTED NAME: Bernie Sheil

TITLE: Compliance Manager

SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

Bulk Petroleum Terminal, SIC Code 5171

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2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is:  
Check appropriate box:

- Actual Major
- Potential Major
- Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below:

PM10 0.006 NOx 0.12 VOC 134.463 SOx 0.256 CO 0.03 HAPs 6.421

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;  
Emissions Certification Report (copy of the most recent submitted to the Department.)



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SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-1 General Reference: COMAR 26.11.13.03B

Briefly describe the Emission Standard/Limit or Operational Limitation:

See Attachment to Section 3B

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: \_\_\_\_\_

X Annual Compliance Certification: \_\_\_\_\_

Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Testing: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Record Keeping: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Reporting: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Frequency of submittal of the compliance demonstration: Annually





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SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: EU-1

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

None

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN  
ALTERNATE OPERATING SCENARIO

Scenario No.: \_\_\_\_\_

Emissions Unit No.: EU-1 General Reference: \_\_\_\_\_

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

None

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference NA Describe: \_\_\_\_\_

Testing: Reference NA Describe: \_\_\_\_\_

Record Keeping: Reference NA Describe: \_\_\_\_\_

Reporting: Reference NA Describe: \_\_\_\_\_

Frequency of submittal of the compliance demonstration: NA

**Attachment to Section 3B  
(Boilers)**

**Table IV – 1**

<b>1.0</b>	<b><u>Emissions Unit Number - EU-1</u></b>  One (1) No. 2 fuel oil-fired boiler rated at 4.6 million BTU per hour (ARMA Registration No. 510-0677-4-0293).  One (1) No. 2 fuel oil-fired boiler rated at 2.0 million BTU per hour (ARMA Registration No. 510-0677-4-3049).
<b>1.1</b>	<b><u>Applicable Standards/Limits:</u></b>  A. <u>Visible Emissions Limitations</u> In accordance with COMAR 26.11.09.05A(2), the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.  In accordance with COMAR 26.11.09.05A(3), COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments, or occasional cleaning of control equipment if:  1. The visible emissions are not greater than 40 percent opacity; and  2. The visible emissions do not occur for more than six (6) consecutive minutes in any 60 minute period.

**Table IV – 1**

**B. Control of Sulfur Oxides**

In accordance with COMAR 26.11.09.07A(2)(b), the Permittee shall not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

**C. Control of HAP**

40 CFR, Part 63, Subpart JJJJJJ, which requires work practice standards, emission reduction measures, and management practices for control of HAP emissions for existing oil-fired boilers with a heat input capacity of equal to or less than 5 million BTU per hour. **[Authority: Table 2 to Subpart JJJJJJ of Part 63 – Work Practice Standards, Emission Reduction Measures, and Management Practices]**

**D. Operational Limitation**

The Permittee shall only burn distillate fuel oil (No. 2 fuel oil) in the boilers unless the Permittee applies for and receives an approval or permit from the Department to burn alternate fuels. **[Authority: COMAR 26.11.02.09A]**

**1.2 Testing Requirements:**

**A. and B. Control of Visible Emissions and Control of Sulfur Oxides**

See Monitoring, Record Keeping, and Reporting Requirements.

**C. Control of HAP**

The Permittee must demonstrate continuous compliance by conducting performance tune-ups of the boilers. **[Authority: 40 CFR §63.11196(a), §63.11201(b) and (d), §63.11210(c) and (j), §63.11214(b) and Table 2, Item 12, of 40 CFR, Part 63, Subpart JJJJJJ]**

- (1) The Permittee must conduct the tune-ups while burning distillate oil (No. 2 fuel oil). **[Authority: §63.11223(a)]**
- (2) The Permittee must conduct a tune-up of each boiler every five (5) years. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. **[Authority: §63.11223(e)]**
- (3) Each tune-up shall be conducted at follows:
  - (a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).

**Table IV – 1**

- (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
  - (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).
  - (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
  - (e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
  - (f) Maintain on-site and submit, if requested by the Department, a report containing the following information:
    - (i) The concentration of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.
    - (ii) The description of any corrective actions taken as a part of the tune-up of the boiler.
  - (g) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.
- [Authority: §63.11223(b)]**

**D. Operational Limitation**

See Record Keeping and Reporting Requirements.

Table IV – 1

1.3	<p><b><u>Monitoring Requirements:</u></b></p> <p>A. <u>Visible Emissions Limitations</u> The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certificate from the fuel supplier that the fuel oil is in compliance with the 0.3 percent sulfur content by weight limitation of COMAR 26.11.09.07A(2)(b). <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of HAP</u> At all times the Permittee must operate and maintain the boilers, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by 40 CFR, Part 63, Subpart JJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that 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. <b>[Authority: 40 CFR §63.11205(a)]</b></p> <p>D. <u>Operational Limitation</u> See Record Keeping and Reporting Requirements</p>
1.4	<p><b><u>Record Keeping Requirements:</u></b></p> <p>A. <u>Visible Emissions Limitations</u> The Permittee shall maintain an operations manual and preventative maintenance plan for the boiler. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with the 0.3 percent sulfur content by weight limitation of COMAR 26.11.09.07A(2)(b) for at least five (5) years. <b>[Authority: COMAR 26.11.03.06C]</b></p>

**Table IV – 1**

**C. Control of HAP**

The Permittee must maintain the following records:

- (1) As required in 40 CFR §63.10(b)(2)(xiv), the Permittee must keep a copy of each notification and report that the Permittee submitted to comply with 40 CFR, Part 63, Subpart JJJJJJ and all documentation supporting any Initial Notification of Notification of Compliance Status that the Permittee submitted.
- (2) The Permittee must keep records to document conformance with the work practices, emission reduction measures, and management practices required by 40 CFR §63.11214 and 40 CFR §63.11223 as follows:
  - (a) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
  - (b) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
  - (c) Records of actions taken during periods of malfunctions to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 40 CFR §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
  - (d) Records must be in a form suitable and readily available for expeditious review. The Permittee must keep each record for five (5) years following the date of each recorded action. The Permittee must keep each record on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least two (2) years after the date of each recorded action. The Permittee may keep the records off site for the remaining three (3) years.

**[Authority: 40 CFR §63.11225(c) and (d)]**

**Table IV – 1**

	<p>D. <u>Operational Limitation</u> The Permittee shall keep annual fuel records for the boiler including the type of fuel and the amount burned. <b>[Authority: COMAR 26.11.02.19C and D]</b></p>
1.5	<p><b><u>Reporting Requirements:</u></b></p> <p>A. <u>Visible Emissions Limitation</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall make annual fuel supplier certifications available to the Department upon request. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>C. <u>Control of HAP</u> The Permittee shall submit the following notifications and reports:</p> <p>(1) The Permittee must submit all of the notifications in 40 CFR §63.7(b), §63.8(e) and (f), and §63.9(b) through (e), (g), and (h) that apply to the Permittee. <b>[Authority: 40 CFR §63.11225(a)(1)]</b></p> <p>(2) The Permittee must prepare a 5-year compliance report containing the following information:</p> <p>(a) Company name and address.</p> <p>(b) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR, Part 63, Subpart JJJJJJ. The notification must including the following certification of compliance, as applicable, and signed by a responsible official:</p> <p>(i) "This facility complies with the requirements in 40 CFR §63.11223 to conduct a 5-year tune-up of the boilers."</p> <p>(ii) "This facility complies with the requirement in 40 CFR §63.11214(d) and §63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar</p>

**Table IV – 1**

design if manufacturer's recommended procedures are not available.”

**[Authority: 40 CFR §63.11225(b)]**

(3) If the Permittee has switched fuels or made a physical change to the boilers and the fuel switch or change resulted in the applicability of a different subcategory within 40 CFR, Part 63, Subpart JJJJJJ, or in the boiler switching out of 40 CFR, Part 63, Subpart JJJJJJ due to a change to 100 percent natural gas, the Permittee must provide notice of the date upon which the Permittee made the change, within 30 days of the change. The notification must identify:

(a) The name of the owner or operator of the affected source, the location of the source, the boiler that was changed, and the date of the notice.

(b) The date upon which a change occurred and a description of the change.

**[Authority: 40 CFR §63.11225(b) and (g)]**

**D. Operational Limitation**

Annual fuel usage records including the type of fuel used shall be submitted with the required annual emission certification. **[Authority: COMAR 26.11.02.19C and D]**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-2 General Reference: COMAR 26.11.13.03B

Briefly describe the Emission Standard/Limit or Operational Limitation:

See Attachment to Section 3B

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: \_\_\_\_\_

Annual Compliance Certification: \_\_\_\_\_

Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Testing: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Record Keeping: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Reporting: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Frequency of submittal of the compliance demonstration: COMAR 26.11.03.06 C(7)





SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: EU-2

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Operating Scenario #2: The tank may be used for the storage of fuel oils. During the storage period involving the fuel oil the tank is not subject to the control requirements of COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).



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SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN  
ALTERNATE OPERATING SCENARIO

Scenario No.: 2

Emissions Unit No.: EU-2 General Reference: COMAR 26.11.03.06

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

During the storage of fuel oil the tank is not subject to COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference NA Describe: \_\_\_\_\_

Testing: Reference NA Describe: \_\_\_\_\_

Record Keeping: Reference COMAR 26.11.03.06(9) Describe: Maintain a log detailing the scenario under which the tank is operating and the date and time that the scenario started and ended.

Reporting: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Frequency of submittal of the compliance demonstration: NA

**Attachment to Section 3B  
(Emission Units EU-2 and EU-5)**

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

<b>2.0</b>	<p><b><u>Emissions Unit Numbers – EU-2 and EU-5</u></b></p> <p>Tank No. 103: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage (EU-2).</p> <p>Tank No. 108: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage (EU-5).</p> <p>Tank No. 109: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage (EU-5).</p>
------------	--

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

These tanks are all registered under ARMA Registration No. 510-0677-9-0784.

**2.1 Applicable Standards/Limits:**

Control of VOC and HAP

(1) **COMAR 26.11.13.03A(1)(a) and (b)** which require that:

(a) Each tank's gauging and sampling devices be gas tight except when in use. **[Authority: COMAR 26.11.13.03A(1)(a)]**

(b) Each tank be equipped with one of the following properly installed, operating, and well maintained emission control systems: **[Authority: COMAR 26.11.13.03A(1)(b)]**

(i) An internal floating roof equipped with a primary and secondary seal;

(ii) A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or

(iii) A vapor control system capable of collecting the vapors from the tank and disposing of these vapors to prevent their emission to the atmosphere.

Note: The Department has determined that the installation of an internal floating roof equipped with a mechanical shoe seal satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i), which requires large, closed top gasoline storage tanks to be equipped with an internal floating roof equipped with a primary and secondary seal.

(2) **COMAR 26.11.13.03A(2)** which requires the Permittee to meet the following seal requirements:

(a) There shall be no visible holes, tears, or other openings in a seal or seal fabric. **[Authority: COMAR 26.11.13.03A(2)(a)]**

(b) Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

the tank wall. **[Authority: COMAR 26.11.13.03A(2)(b)]**

- (c) The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than 1/8 inch in width may not exceed 1.0 square inch per foot of tank diameter. **[Authority: COMAR 26.11.13.03A(2)(c)]**
- (3) **40 CFR 60, Subpart Kb** which requires the Permittee to equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications:
- (a) 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. **[Authority: 40 CFR 60.112b(a)(1)(i)]**
  - (b) 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: **[Authority: 40 CFR 60.112b(a)(1)(ii)]**
    - (i) 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. **[Authority: 40 CFR 60.112b(a)(1)(ii)(A)]**
    - (ii) 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. **[Authority: 40 CFR 60.112b(a)(1)(ii)(B)]**

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

- (iii) 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. **[Authority: 40 CFR 60.112b(a)(1)(ii)(C)]**
- (c) 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. **[Authority: 40 CFR 60.112b(a)(1)(iii)]**
- (d) 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. **[Authority: 40 CFR 60.112b(a)(1)(iv)]**
- (e) 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. **[Authority: 40 CFR 60.112b(a)(1)(v)]**
- (f) 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. **[Authority: 40 CFR 60.112b(a)(1)(vi)]**
- (g) 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. **[Authority: 40 CFR 60.112b(a)(1)(vii)]**
- (h) 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. **[Authority: 40 CFR 60.112b(a)(1)(viii)]**

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

	<p>(i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. <b>[Authority: 40 CFR §60.112b(a)(ix)]</b></p> <p>(4) If the gasoline storage tank is subject to, and complies with, the control requirements of 40 CFR Part 60, Subpart Kb, the storage tank will be deemed in compliance under 40 CFR, Part 63, Subpart BBBB. <b>[Authority: 40 CFR §63.11087(f)]</b></p>
<p><b>2.2</b></p>	<p><b><u>Testing Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) See Monitoring, Record Keeping and Reporting Requirements.</p> <p>(2) and (3) The Permittee shall determine the total seal gap by summing the areas of the individual gaps. The lengths and widths of the gaps are measured by passing a 1/8 inch diameter probe between the seal and the tank wall and other obstructions in the tank. (The probe should move freely without forcing or binding against the seal.) <b>[Authority: COMAR 26.11.13.03A(4)]</b></p> <p>(4) See Monitoring, Record Keeping and Reporting Requirements.</p>
<p><b>2.3</b></p>	<p><b><u>Monitoring Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) The Permittee shall perform an annual visual inspection of each tank's gauging and sampling devices. If a visual inspection shows noncompliance with the gas tight requirement, the Permittee shall repair the device within 45 days or empty and remove the tank from service within 45 days.</p> <p>If a repair cannot be made within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that will assure that the device will be repaired or the tank will be emptied as soon as possible. <b>[Authority: Premises Wide Permit to Construct issued on</b></p>

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

**August 6, 2010]**

(2) (3) and (4)

The Permittee shall comply with the following inspection requirements for each tank:

(a) The Permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling or refilling the storage vessel with volatile organic liquid. If there are holes, tears or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof the Permittee shall repair the items before filling or refilling the storage vessel. **[Authority: 40 CFR §60.113b(a)(1)]**

(b) The Permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days.

If a failure that is detected during the required inspection cannot be repaired within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that assure that the control equipment will be repaired or the tank will be emptied as soon as possible.

**[Authority: COMAR 26.11.13.03A(3)(a) and (b), and 40 CFR §60.113b(a)(2) and (a)(3)(ii)]** Note: the annual inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(2) and (a)(3)(ii) satisfy the annual inspection requirements of COMAR 26.11.13.03A(3)(a) and (b).

(c) The Permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

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 Permittee shall repair the items as necessary so that none of the conditions exist before refilling the storage vessel with volatile organic liquid. The storage vessel shall be inspected within 10 years from the date of the last internal inspection. **[Authority: COMAR 26.11.13.03A(3)(c) and 40 CFR §60.113b(a)(4)]**

**2.4 Record Keeping Requirements:**

Control of VOC and HAP

- (1) The Permittee shall record the results of all visual inspections of each tank's gauging and sampling devices. The Permittee shall also record all repairs or replacements including the date and the action taken. **[Authority: Premises Wide Permit to Construct issued on August 2, 2010]**
- (2) (3) and (4)
  - (a) The Permittee shall keep a record of each inspection performed as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), and (a)(4) and COMAR 26.11.13.03A(3) for each storage tank. 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). **[Authority: COMAR 26.11.13.03C(1) and 40 CFR §60.115b(a)(2)]**
  - (b) The Permittee shall record all repairs or replacement of the seals, or internal floating roof including a detailed description of work performed and the date and the action taken for each storage tank. **[Authority: COMAR 26.11.13.03C(2)]**

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

- (c) The Permittee shall record the average monthly storage temperature and throughout for each storage tank. **[Authority: COMAR 26.11.13.03C(3)]**
- (d) The Permittee shall maintain readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel. The records shall be maintained on-site for the life of the storage vessels. **[Authority: 40 CFR §60.116b(a) and (b)]**
- (e) The Permittee shall maintain records of the volatile organic liquid stored, the period of storage, and the maximum true vapor pressure of the volatile organic liquid during the respective storage period for each storage tank. The maximum true vapor pressure shall be determined using the procedures listed in 40 CFR §60.116b(e). **[Authority: 40 CFR §60.116b(c) and (e)]**

**2.5 Reporting Requirements:**

Control of VOC and HAP

(1) Records of gauging and sampling device inspections shall be made available to the Department upon request. **[Authority: COMAR 26.11.03.06C]**

(2) (3) and (4)

(a) The Permittee shall notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR §60.113b(a)(1) and (a)(4) to afford the Department the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Department at least seven (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

**Table IV – 2 (Bulk Storage Tanks Subject to 40 CFR 60, Subpart Kb)**

the Department at least fifteen (15) days prior to the refilling. **[Authority: 40 CFR §60.113b(a)(5) and COMAR 26.11.13.03A(3)(d)]**

(b) If any of the conditions described in 40 CFR §60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2), the Permittee shall furnish a report to the Department 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. **[Authority: 40 CFR §60.115b(a)(3)]**

(c) After each inspection required by 40 CFR §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 40 CFR §60.113b(a)(3)(ii), the Permittee shall furnish a report to the Department within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. **[Authority: 40 CFR §60.115b(a)(4)]**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-3 General Reference: COMAR 26.11.13.03B

Briefly describe the Emission Standard/Limit or Operational Limitation:

See Attachment to Section 3B

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: \_\_\_\_\_

X Annual Compliance Certification: \_\_\_\_\_

Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Testing: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Record Keeping: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Reporting: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Frequency of submittal of the compliance demonstration: COMAR 26.11.03.06 C(7)





MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: EU-3

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Operating Scenario #2: The tanks may be used for the storage of fuel oils. During the storage period involving the fuel oil the tanks are not subject to the control requirements of COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN  
ALTERNATE OPERATING SCENARIO

Scenario No.: 2

Emissions Unit No.: EU-3 General Reference: COMAR 26.11.03.06

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

During the storage of fuel oil the tanks are not subject to COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference NA Describe: \_\_\_\_\_

Testing: Reference NA Describe: \_\_\_\_\_

Record Keeping: Reference COMAR 26.11.03.06(9) Describe: Maintain a log detailing the scenario under which the tanks are operating and the date and time that the scenario started and ended.

Reporting: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Frequency of submittal of the compliance demonstration: NA

**Attachment to Section 3B  
(Emission Unit EU-3)**

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

3.0	<p><b><u>Emissions Unit Number – EU-3</u></b></p> <p>Tank No. 104: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.</p> <p>Tank No. 105: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with a mechanical shoe seal for gasoline and distillate fuel oil storage.</p> <p>Tank No. 110: One (1) large (greater than 40,000-gallons) bulk IFR storage tank with primary and secondary seals for gasoline and distillate fuel oil storage.</p> <p>These tanks are all registered under ARMA Registration No. 510-0677-9-0784.</p>
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3.1	<p><b><u>Applicable Standards/Limits:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) COMAR 26.11.13.03A(1)(a) and (b), which require the Permittee to meet the following equipment requirements for large, closed top storage tanks:</p> <ul style="list-style-type: none"><li>(a) Each tank's gauging and sampling devices shall be gas tight except when in use. <b>[Authority: COMAR 26.11.13.03A(1)(a)]</b></li><li>(b) Each of the storage tanks shall be equipped with one of the following properly installed, operating, and well maintained emission control systems:<ul style="list-style-type: none"><li>(i) An internal floating roof equipped with a primary and secondary seal;</li><li>(ii) A pressure tank system that maintains a pressure at all times to prevent loss of vapors to the atmosphere; or</li><li>(iii) A vapor control system capable of collecting the vapors from the tank and disposing of the vapors to prevent their emission to the atmosphere.</li></ul></li></ul> <p><b>[Authority: COMAR 26.11.13.03A(1)(b)]</b></p>
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**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

Note: The Department has determined that the installation of an internal floating roof equipped with a mechanical shoe seal satisfies the requirement of COMAR 26.11.13.03A(1)(b)(i), which requires large, closed top gasoline storage tanks to be equipped with an internal floating roof equipped with a primary and secondary seal.

- (2) COMAR 26.11.13.03A(2), which requires the Permittee to meet the following seal requirements:
- (a) There shall be no visible holes, tears, or other openings in the seal or seal fabric. **[Authority: COMAR 26.11.13.03A(2)(a)]**
  - (b) Each seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall. **[Authority: COMAR 26.11.13.03A(2)(b)]**
  - (c) The accumulated area of the gaps between the secondary seal and the tank wall and between the seal and other obstructions inside the tank (that is, ladder, roof supports) that are greater than  $\frac{1}{8}$  inch in width may not exceed 1.0 square inch per foot of tank diameter. **[Authority: COMAR 26.11.13.03A(2)(c)]**
- (3) 40 CFR 60.112b(a)(1), which requires the Permittee to equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the specifications listed in 40 CFR §60.112b(a)(1)(i), §60.112b(a)(1)(ii)(A), §60.112b(a)(1)(ii)(C), and §60.112b(a)(1)(iii). **[Authority: 40 CFR §60.112b(a)(1), §63.11087(a), and Table 1 to 40 CFR, Part 63, Subpart BBBB, requirement 2(b)]**

The internal floating roof shall be floating on the liquid surface (but not necessarily in complete contact with it) inside the storage vessel 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. **[Authority: 40 CFR §60.112b(a)(1)(i), §63.11087(a), and Table 1 to 40 CFR, Part 63, Subpart BBBB, requirement 2(b)]**

[Note: These requirements also satisfy the requirements of COMAR 26.11.13.03A(1)(b) and COMAR 26.11.13.03A(2).]

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

**3.2 Testing Requirements:**

Control of VOC and HAP

- (1) See Monitoring, Record Keeping, and Reporting Requirements.
- (2) During all internal tank inspections, the Permittee shall determine the total seal gap by summing the areas of the individual gaps. The lengths and widths of the gaps shall be measured by passing a  $\frac{1}{8}$  inch diameter probe between the seal and the tank wall and other obstructions in the tank. (The probe should move freely without forcing or binding against the seal). **[Authority: COMAR 26.11.13.03A(4)]**
- (3) See Monitoring, Record Keeping, and Reporting Requirements.

**3.3 Monitoring Requirements:**

Control of VOC and HAP

- (1) The Permittee shall perform an annual visual inspection of each tank's gauging and sampling devices. If a failure of a gauging or sampling device is detected during a required visual inspection, the Permittee shall repair the device or empty and remove the tank from service within 45 days. If a repair cannot be made within 45 days and if the tank cannot be emptied within 45 days, a 30-day extension may be requested from the Department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that will assure that the device will be repaired or the tank will be emptied as soon as possible. **[Authority: Premises Wide Permit to Construct issued on August 6, 2010]**
- (2) and (3) The Permittee shall meet the following monitoring requirements:
  - (a) The Permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal, prior to filling or refilling the storage vessel with volatile organic liquid. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the Permittee shall repair the items before filling or refilling the storage vessel. **[Authority: 40 CFR §60.113b(a)(1), §63.11087(c), and §63.11092(e)(1)]**

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

- (b) The Permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal through manholes and roof hatches on the fixed roof at least once every twelve (12) months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days, and perform an internal inspection of the floating roof and seals. If a failure that is detected during inspections 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 Department in the inspection report required by 40 CFR §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 Permittee will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. **[Authority: COMAR 26.11.13.03A(3)(a), COMAR 26.11.13.03A(3)(b), 40 CFR §60.113b(a)(2), §60.113b(a)(3)(ii), §63.11087(c), and §63.11092(e)(1)]** Note: the annual inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(2) and (a)(3)(ii) satisfy the annual inspection requirements of COMAR 26.11.13.03A(3)(a) and (b).
- (c) The Permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal, 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 Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with volatile organic liquid. The storage vessel shall be emptied, degassed, and inspected in accordance with the specifications of this paragraph at a frequency of no less than once every ten (10) years. **[Authority: COMAR 26.11.13.03A(3)(c), 40 CFR §60.113b(a)(3)(i), §60.113b(a)(4), §63.11087(c), and §63.11092(e)(1)]** Note: the internal inspection requirements of 40 CFR, Part 60, Subpart Kb §60.113b(a)(3)(i) and (a)(4) satisfy the internal inspection requirements of COMAR 26.11.13.03A(3)(c).

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

<b>3.4</b>	<p><b><u>Record Keeping Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) The Permittee shall record the results of all visual inspections of each tank's gauging and sampling devices. The Permittee shall also record all repairs or replacements including the date and the action taken. <b>[Authority: Premises Wide Permit to Construct issued on August 6, 2010]</b></p> <p>(2) and (3) The Permittee shall maintain the following records: <b>[Authority: COMAR 26.11.13.03C(4)]</b></p> <p>(a) Each inspection performed as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), and (a)(4) and COMAR 26.11.13.03A(3) for each storage tank. 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). This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a). <b>[Authority: COMAR 26.11.13.03C(1), 40 CFR §60.115b(a)(2), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]</b></p> <p>(b) All repairs or replacement of the seals, including the date and the action taken for each storage tank. <b>[Authority: COMAR 26.11.13.03C(2)]</b></p> <p>(c) The average monthly storage temperature and throughput for each storage tank. <b>[Authority: COMAR 26.11.13.03C(3)]</b></p>
<b>3.5</b>	<p><b><u>Reporting Requirements:</u></b></p> <p><u>Control of VOC and HAP</u></p> <p>(1) Records of visual inspections of each tank's gauging and sampling devices shall be made available to the Department upon request. <b>[Authority: COMAR 26.11.03.06C]</b></p> <p>(2) and (3) The Permittee shall meet the following reporting requirements:</p> <p>(a) The Permittee shall notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an</p>

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

inspection is required by 40 CFR 60.113b(a)(1) and (a)(4) to afford the Department the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Department at least fifteen (15) 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 Department at least fifteen (15) days prior to the refilling. **[Authority: COMAR 26.11.13.03A(3)(d), 40 CFR §60.113b(a)(5), §63.11087(c), and §63.11092(e)(1)]**

- (b) If any of the conditions described in 40 CFR §60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2), a report shall be furnished to the Department 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. This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a). **[Authority: 40 CFR §60.115b(a)(3), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]**
- (c) After each inspection required by 40 CFR §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 40 CFR §60.113b(a)(3)(ii), a report shall be furnished to the Department within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. This information shall also be included in the semiannual compliance report required by 40 CFR §63.11095(a). **[Authority: 40 CFR §60.115b(a)(4), §63.11087(e), §63.11094(a), and §63.11095(a)(1)]**
- (d) The Permittee shall submit to the Department semiannual compliance reports that include the following information:
  - (i) Records of each inspection performed for each of the storage tanks as required by 40 CFR §60.113b(a)(1), (a)(2), (a)(3), (a)(4), and COMAR 26.11.13.03A(3). **[Authority: 40 CFR §60.115b(a)(2), §63.11087(e), and §63.11095(a)(1)]**

**Table IV – 3 (Bulk Storage Tanks Not Subject to 40 CFR 60, Subpart Kb)**

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|--|--|
|  | <p>(ii) Reports of any of the storage tanks having the defects described in 40 CFR §60.113b(a)(2) that are detected during the annual visual inspection required by 40 CFR §60.113b(a)(2).<br/><b>[Authority: 40 CFR §60.115b(a)(3), §63.11087(e), and §63.11095(a)(1)]</b></p> <p>(iii) Reports that find any of the storage tanks not meeting the specifications of 40 CFR §60.112b(a)(1) or §60.113b(a)(3) during inspections required by 40 CFR §60.113b(a)(3).<br/><b>[Authority: 40 CFR §60.115b(a)(4), §63.11087(e), and §63.11095(a)(1)]</b></p> |
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MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No. <u>EU-4 (Truck Rack)</u> 1a. Date of installation (month/year): <u>1949</u>	2. MDE Registration No.:(if applicable) <u>510-0677-9-0784</u>
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):  Truck loading rack equipped with vapor collection and John Zink Carbon Adsorption/Absorption vapor recovery unit (VRU).  4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:  General Reference: COMAR 26.11.03.06 Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year	
5. Fuel Consumption: Type(s) of Fuel      % Sulfur      Annual Usage (specify units) 1. <u>NA</u> _____ 2. _____ 3. _____	
6. Emissions in Tons:  A. Actual Major: <u>X</u> Potential Major : _____ ( note: before control device)  B. Actual Emissions: NOx: NA Sox: NA VOC: 72.0 PM10: NA HAPs: 3.2	

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-4 General Reference: COMAR 26.11.13.03B

Briefly describe the Emission Standard/Limit or Operational Limitation:

See Attachment to Section 3B

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: \_\_\_\_\_
- Annual Compliance Certification: \_\_\_\_\_
- Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Testing: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Record Keeping: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Reporting: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Frequency of submittal of the compliance demonstration: COMAR 26.11.02.19





SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: EU-4

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Operating Scenario # 2: The truck rack also loads distillate fuels



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN  
ALTERNATE OPERATING SCENARIO

Scenario No.: 2

Emissions Unit No.: EU-4 General Reference: \_\_\_\_\_

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

During the loading of distillate fuels, the truck rack is not subject to the control requirements  
Of COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Testing: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Record Keeping: Reference: \_\_\_\_\_ Describe: \_\_\_\_\_

Reporting: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Frequency of submittal of the compliance demonstration: NA

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SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units</u> No. EU-4	2. <u>Emissions Point</u> No.: EP-4
3. <u>Type and Description of Control Equipment</u> :	
John Zink carbon/absorption vapor recovery unit (VRU)	
4. <u>Pollutants Controlled</u> : VOC and HAP	Control Efficiency: 99.87% (from test On 6/1/17)
5. <u>Capture Efficiency</u> : 98.7%	

**Attachment to Section 3B  
(Emission Unit EU-4)**

**Table IV – 4 (Truck Loading Rack)**

4.0	<p><b><u>Emissions Unit Number – EU-4</u></b></p> <p>EU-4: One (1) three-bay loading rack for gasoline controlled by a John Zink Carbon Adsorption/Absorption Recovery Unit (Bay No. 1, 2, and 35) (ARMA Registration No. 510-0677-9-0784).</p>
4.1	<p><b><u>Applicable Standards/Limits:</u></b></p> <p>A. <u>Control of VOC and HAP (Vapor Collection and Control Requirements)</u></p> <ol style="list-style-type: none"><li>1. The vapor collection and control system controlling emissions from the loading system shall collect the total organic compound (TOC) vapors displaced from the cargo tanks during product loading and shall control at least 90 percent of all vapors from the loading racks. <b>[Authority: COMAR 26.11.13.04A(1)(a), 40 CFR §60.502(a), 40 CFR §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirement 1(a)]</b></li> <li>2. The emissions from the vapor collection and control system shall be limited to 0.29 pounds of TOC per 1,000 gallons (35 milligrams per liter) of gasoline or TOC loaded. Note: Compliance with this requirement also demonstrates compliance with the requirements of 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirements 1(b). <b>[Authority: COMAR 26.11.03.06C, COMAR 26.11.13.04A(1)(a)(i), 40 CFR §60.502(b), and Table 2 to 40 CFR, Part 63, Subpart BBBB, requirement 1(b)]</b></li></ol>

**Table IV – 4 (Truck Loading Rack)**

3. The Permittee shall limit emissions from the vapor collection and control system to not more than 0.083 pounds of VOC per 1,000-gallons (10 milligrams of TOC per liter) of gasoline or TOC loaded. **[Authority: Premises Wide Permit to Construct issued on August 6, 2010]** Compliance with this requirement also provides compliance with the requirements of 40 CFR 60, Subpart XX, §60.502(b); COMAR 26.11.13.04A(1)(a)(i); and requirement 1(b) of Table 2 to 40 CFR, Part 63, Subpart BBBBBB.

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in 40 CFR, Part 60, Subpart XX, §60.502(e) through (j). For the purposes of this requirement, the term “tank truck” as used in 40 CFR §60.502(e) through (j) means “cargo tank” as defined in 40 CFR §63.11100. **[Authority: 40 CFR §63.11088(a) and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(d)]**

The Permittee may not allow a gasoline or VOC tank truck to be filled or emptied unless the tank has been certified annually as capable of sustaining a pressure change of not more than three (3) inches of water in five (5) minutes when pressurized to a gauge pressure of 18 inches of water (4,479 kilonewtons/square meter), or evacuated to a gauge pressure of six (6) inches of water (1,493 kilonewtons/square meter), during a test, according to the procedure referenced in COMAR 26.11.13.05B(2). The Permittee shall complete any needed repairs, and retest within 15 days of the original test date. **[Authority: 40 CFR §60.502(e) and COMAR 26.11.13.05(A) and (B)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

The vapor collection and control system and the liquid loading equipment shall be operated to control back pressure and leaks such that:

1. The gauge pressure in the delivery tank shall not exceed 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR §60.503(d). **[Authority: 40 CFR §60.502(h) and §60.503(d)]**

**Table IV – 4 (Truck Loading Rack)**

2. No pressure-vacuum vent in the bulk gasoline terminal's vapor collection and control system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water). **[Authority: 40 CFR §60.502(i)]**
  3. During loading, the gasoline or VOC tank truck pressure does not exceed 18 inches of water, and vacuum does not exceed 6 inches of water. **[Authority: COMAR 26.11.13.04A(1)(b)(i)]**
  4. There are no gasoline or VOC leaks in the system when tested by the method referenced in COMAR 26.11.13.04A(3)(a) during loading or unloading operations. **[Authority: COMAR 26.11.13.04A(1)(b)(ii)]**
- D. Control of VOC and HAP (Design and Operational Requirements)
1. The exhaust gases from the loading rack shall vent through the VRU prior to discharging to the atmosphere. **[Authority: COMAR 26.11.03.06C]**
  2. The vapor collection system shall prevent any total organic compound vapors collected at one loading rack from passing to another loading rack or lane to the atmosphere. **[Authority: 40 CFR §60.502(d), §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(c)]**
  3. The Permittee shall assure that loadings of gasoline or VOC tank trucks are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system. **[Authority: 40 CFR §60.502(f)]**
  4. The Permittee shall assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline or VOC tank truck. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading rack. **[Authority: 40 CFR §60.502(g)]**
  5. The Permittee shall maintain a top submerged or bottom loading system on the terminal's loading rack. **[Authority: COMAR 26.11.13.04A(1)(c)]**

**Table IV – 4 (Truck Loading Rack)**

**4.2 Testing Requirements:**

**A. Control of VOC and HAP (Vapor Collection and Control Requirements)**

1. The Permittee shall conduct performance tests on the VRU at least once every five (5) years, during the period between May 1 and September 15, to determine total organic emissions per liter of gasoline loaded at the facility and to determine an overall control efficiency for TOC emissions caused by the facility's loading operations [**Authority: COMAR 26.11.13.04A(2)(a)(i) and 40 CFR §63.11092(a)**]
2. The tests shall be conducted in accordance with the test methods and procedures listed in 40 CFR §63.11092(a)(1)(i) and (ii), 40 CFR §60.503(a), 40 CFR §60.503(b), 40 CFR §60.503(c), and Method 1009 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January 1991). [**Authority: COMAR 26.11.13.04A(3)(b), 40 CFR §60.503(a) through (c), 40 CFR §63.11092(a)(1)(i) and (ii), and 40 CFR §63.11092(a)(2)**]
3. The Permittee shall submit a Notification of Performance Test as specified in 40 CFR §63.9(e) not less than 60 days before the scheduled test date, and the notification shall contain a copy of the test protocol required under COMAR 26.11.13.04A(2)(a)(ii) and 40 CFR §63.7(c). A copy of the test results shall be submitted to the Department no later than 60 days after the test date. [**Authority: COMAR 26.11.13.04A(2)(a)(ii) and (iii), 40 CFR §63.9(e), and 40 CFR §63.11093(c)**]
4. Unless the Permittee obtains from the Department written approval to monitor and record an alternative operating parameter, during each required performance test on a VRU, the Permittee shall determine a monitored operating parameter value for the vapor processing system and shall continuously record the operating parameter as described below: [**Authority: 40 CFR §63.11092(b)(1), §63.11092(b)(1)(iv), §63.11092(b)(3), (4), and (5), and Indicator 1 of the CAM Plan included in Table IV-4**]
  - (a) 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

**Table IV – 4 (Truck Loading Rack)**

each day of operation of the loading rack to determine the maximum vacuum level achieved.

(b) 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 40 CFR §63.14, or by another suitable procedure as recommended by the manufacturer.

(c) Conduct monthly measurements of the carbon bed outlet VOC concentration over the last five (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.

6. For all subsequent performance tests performed after the initial performance test required under 40 CFR §63.11092(a), the Permittee shall document the reasons for any change in the operating parameter values since the previous performance test. **[Authority: 40 CFR §63.11092(c)]**

7. Performance tests conducted shall be conducted under conditions that the Department specifies based on representative performance (i.e., performance based on normal operating conditions) of the VRU. The Permittee shall make available to the Department upon request necessary records to determine the conditions of the performance tests. **[Authority: 40 CFR §63.11092(g)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The annual certification test for gasoline cargo tanks shall consist of the following test methods: EPA Method 27, Appendix A-8, 40 CFR Part 60 and Method 1007 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources," (January 1991) which is incorporated by reference in COMAR 26.11.01.04C.

The test shall be conducted using a time period (t) for the pressure and vacuum tests of five (5) minutes. The initial pressure (P<sub>i</sub>) for the pressure test shall be 18 inches of water gauge. The initial vacuum (V<sub>i</sub>)

**Table IV – 4 (Truck Loading Rack)**

for the vacuum test shall be six (6) inches of water gauge. The maximum allowable pressure and vacuum changes ( $\Delta p$ ,  $\Delta v$ ) for all affected gasoline cargo tanks is three (3) inches of water, or less, in five (5) minutes.

Any needed repairs shall be completed and the cargo tank shall be retested within 15 days of the original test date.

**[Authority: COMAR 26.11.13.05B, 40 CFR §63.11088(d), and §63.11092(f)(1)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

1. The Permittee shall test for leak-tight conditions in the vapor control system and the gasoline loading equipment during loading or unloading operations, as required in COMAR 26.11.13.04A(1)(b)(ii) each calendar month. The Permittee shall conduct the tests as prescribed in Method 1008 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January 1991). **[Authority: COMAR 26.11.13.04A(1)(b)(ii), COMAR 26.11.13.04A(3)(a), and 40 CFR §63.11089(a)]**
2. At least once each calendar month the Permittee shall determine the back pressure in the vapor collection system by measuring the gauge pressure in the delivery tank during loading of the gasoline tank trucks. A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure with +/-2.5 mm of water precision, shall be calibrated and installed on the facility's vapor collection system at a pressure tap location as close as possible to the connection with the gasoline cargo tank. **[Authority: 40 CFR §60.503(d)(1), §60.502(h), and CAM Plan of Table IV-5, Indicator 3]**

**D. Control of VOC and HAP (Design and Operational Requirements)**

The vapor collection and control system is designed to operate as required. **[Authority: COMAR 26.11.02.09A]**

**Table IV – 4 (Truck Loading Rack)**

**4.3 Monitoring Requirements:**

**A. Control of VOC and HAP (Vapor Collection and Control Requirements)**

1. The Permittee shall calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to a vapor processing system consisting of a VRU. **[Authority: 40 CFR §63.11092(b)]**
2. When the VRU is used to control emissions from a loading rack, the Permittee shall comply with the following monitoring requirements unless the Department approves alternative monitoring requirements under 40 CFR §63.8(b), §63.8(f), and 40 CFR 63 Subpart BBBB: **[Authority: CFR §63.8(b), §63.8(f), 40 CFR §63.11092(b)(1)(iv), and §63.11092(b)(3), (4), and (5)]**
  - (a) At least four (4) times per year, the Permittee shall perform semi-annual preventative maintenance on the VRU according to the recommendations of the manufacturer of the system or other procedures approved by the Department and as specified in the CAM Plan, Indicator 4 for the VRU. **[Authority: COMAR 26.11.03.06C]**
  - (b) Maintain a monitoring and inspection plan that describes the Permittee's approach for meeting the following requirements:
    - (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.
    - (ii) The Permittee 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.
    - (iii) The Permittee shall perform semi-annual preventative maintenance inspections of the carbon adsorption system,

**Table IV – 4 (Truck Loading Rack)**

including the automated alarm or shutdown system for those units so equipped, according to the recommendations of the manufacturer of the system.

(iv) The monitoring plan shall specify conditions that would be considered malfunctions of the carbon adsorption system during the inspections or automated monitoring performed as described in (i) through (iii) above, describe specific corrective actions that will be taken to correct any malfunction, and define what the Permittee would consider to be a timely repair for each potential malfunction.

(v) The Permittee 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.

**[Authority: 40 CFR §63.11092(b)(1)(i)(B)(2)(i) through (v)]**

4. The Permittee shall operate the VRU in a manner not to exceed or not to go below, as appropriate, the operating parameter values for the parameters established in the last performance test and the CAM Plan included in Table IV-5. **[Authority: 40 CFR §63.11092(d)(1) and (2)]**
5. 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 40 CFR §63.11088(a), except for the following: for monitoring and inspection, as required under §63.11092(b)(1)(i)(B)(2), malfunctions that are discovered shall not constitute a violation of the emission standard in 40 CFR §63.11088(a) if corrective actions as described in the monitoring and inspection plan are followed. The Permittee must:

**Table IV – 4 (Truck Loading Rack)**

- (a) Initiate corrective action to determine the cause of the problem within one (1) hour.
  - (b) Initiate corrective action to fix the problem within 24 hours.
  - (c) Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions.
  - (d) Minimize periods of start-up, shutdown, or malfunction.
  - (e) Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem.
- [Authority: 40 CFR §63.11092(d)(3) and (4)]**

6. The Permittee shall, at all times, operate and maintain any affected source subject to the requirements of 40 CFR, Part 63, Subpart BBBBBB, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The Department will determine whether such operation and maintenance procedures are being used based on information available to the Department which may include monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **[Authority: 40 CFR §63.11085(a)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall ensure that loadings of gasoline or VOC into tank trucks are limited to vapor-tight tank trucks using the following procedures: **[Authority: COMAR 26.11.13.05D(2), 40 CFR §60.502(e), §63.11088(a), and Table 2 to 40 CFR, Part 63, Subpart BBBBBB, requirement 1(d)]**

- 1. The Permittee shall obtain the vapor tightness documentation specified in 40 CFR §60.505(b) and COMAR 26.11.13.05D(2) for each gasoline or VOC tank truck which is to be loaded at the facility. **[Authority: 40 CFR §60.502(e)(1) and COMAR 26.11.13.05D(2)]**
- 2. The Permittee shall require the tank identification number to be recorded as each gasoline or VOC tank truck is loaded at the facility. **[Authority: 40 CFR §60.502(e)(2) and COMAR 26.11.13.05D(2)]**

**Table IV – 4 (Truck Loading Rack)**

3. The Permittee shall cross-check each tank identification number with the file of tank vapor tightness documentation within two (2) weeks after the corresponding tank is loaded. **[Authority: 40 CFR §60.502(e)(3)]**

(a) If less than an average of one (1) gasoline or VOC 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 **[Authority: 40 CFR §60.502(e)(3)(i)(A)]**

(b) If less than an average of one (1) gasoline or VOC tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually. **[Authority: 40 CFR §60.502(e)(3)(i)(B)]**

If either the quarterly or semiannual cross-checks reveals that these conditions were not maintained, the Permittee must return to biweekly monitoring until such time as these conditions are met again. **[Authority: 40 CFR §60.502(e)(3)(ii)]**

4. The Permittee shall take steps to assure that the nonvapor-tight tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained. **[Authority: 40 CFR §60.502(e)(5)]**

5. Alternative procedures to those described for limiting gasoline tank truck loadings (as listed in 40 CFR §60.502(e)(1) through (5)) may be approved by the Department. **[Authority: 40 CFR §60.502(e)(6)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

1. The Permittee shall conduct leak inspections each calendar month of all equipment in gasoline service, as defined in 40 CFR §63.11100, including the vapor collection systems, the vapor processing systems, and each loading rack handling gasoline or VOC. The vapor collection system, the vapor processing system, and each loading rack handling gasoline or VOC shall be inspected during the loading of tank trucks for total organic compounds liquid or vapor leaks. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. The source of a leak shall be

**Table IV – 4 (Truck Loading Rack)**

repaired within 15 calendar days after it is detected. [Authority: 40 CFR §60.502(j), §63.11089(a), and CAM Plan, Table IV-5, Indicator 2]

2. The Permittee shall use a log book to record the required monthly leak inspections. The log book shall be signed by the Permittee 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. [Authority: 40 CFR §63.11089(b)]
3. The Permittee shall record each detection of a liquid or vapor leak 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 five (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 if there is a delay of repair. Delay of repair of leaking equipment is allowed if the repair is not feasible within 15 days. The Permittee shall provide in the semiannual report specified in 40 CFR §63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed. [Authority: 40 CFR §63.11089(c) and (d)]
4. Each calendar month, the Permittee shall check the back pressure in the vapor collection system during loading of tank trucks. [Authority: Indicator 3 of the CAM Plan in Table IV-5]

D. Control of VOC and HAP (Design and Operational Requirements)

The vapor collection and control system is designed to operate as required. [Authority: COMAR 26.11.02.09A]

**4.4 Record Keeping Requirements:**

A. Control of VOC and HAP (Vapor Collection and Control Requirements)

1. The Permittee shall maintain the following records for the vapor recovery collection system and VRU:
  - (a) Records of all mass emission rate performance tests conducted on the VRU. [Authority: COMAR 26.11.13.04A(2)(a)(iii)]

**Table IV – 4 (Truck Loading Rack)**

- (b) Records of all maintenance and repairs performed on the VRU. **[Authority: COMAR 26.11.13.04A(2)(b)]**
- (c) Records of all replacements or addition of components on the VRU. **[Authority: 40 CFR §60.505(f)]**
- (e) An up-to-date, readily accessible record of the continuous monitoring data required under 40 CFR §63.11092(b). These records 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 these records. **[Authority: 40 CFR §63.11094(f)(1)]**
- (d) An up-to-date readily accessible copy of the monitoring and inspection plan required under 40 CFR §63.11092(b)(1)(i)(B)(2). **[Authority: 40 CFR §63.11094(f)(3)]**
- (e) An up-to-date, readily accessible record of all system malfunctions including records of the occurrence and duration of each malfunction of operation of process equipment or the air pollution control and monitoring equipment. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.11085(a), including corrective actions to restore manufacturing process and air pollution control and monitoring equipment to its normal or usual manner of operation.

As specified in §63.11092(b)(1)(i)(B)(2)(v), the Permittee 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 and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. These records 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.

**[Authority: 40 CFR §63.11094(f)(4), §63.11094(g)(1) and (2),**

**Table IV – 4 (Truck Loading Rack)**

**§63.11092(b)(1)(i)(B)(2)(v), and Indicator 1 of the CAM Plan, Table IV-4]**

- (f) Records of all preventative maintenance as required by the CAM Plan for the VRU. **[Authority: Indicator 1 and 4 of the CAM Plan, Table IV-5]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall maintain the following records to ensure each tank truck's vapor tightness, including annual certification testing performed in accordance with 40 CFR §63.11092(f)(1) **[Authority: 40 CFR §63.11094(b) and §63.11094(b)(1)]**:

1. Records of each tank truck's vapor tightness documentation required under §60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection. **[Authority: 40 CFR §60.505(a)]**

Record of each tank truck's vapor tightness documentation file shall be updated at least once per year to reflect current test results as determined by EPA Reference Method 27. In accordance with 40 CFR §60.505(b) and COMAR 26.11.13.05D(2), this documentation shall include, as a minimum, the following information:

- (a) Test title: Gasoline Delivery Tank Pressure Test – EPA Reference Method 27 or an approved alternative method.
- (b) Tank owner and address.
- (c) Tank identification number.
- (d) Testing location.
- (e) Date of test.
- (f) Date and type of repair, if applicable.
- (g) Date of retest, if applicable.
- (h) Tester name and signature.
- (i) Witnessing inspector, if any: Name, signature, and affiliation.
- (j) Vapor tightness repair: Nature of repair work and when performed in relation to vapor tightness testing.
- (k) Test results: Actual pressure change in 5 minutes, millimeters of water (average for two (2) runs).
- (l) Pressure testing: The initial and final test pressure, the time of each reading, and the actual pressure change.
- (m) Vacuum testing: The initial and final test vacuum, the time of each reading, and the actual vacuum change.

**Table IV – 4 (Truck Loading Rack)**

(n) Number of leaks found with an instrument and leak definition.  
**[Authority: COMAR 26.11.13.05D(1)(a), COMAR 26.11.13.05D(2),  
40 CFR §60.505(b), §63.11088(f), and §63.11094(b)(2)]**

2. Documentation of all notifications for non-vapor-tight tank trucks as specified in 40 CFR §60.502(e)(4). **[Authority: 40 CFR §60.505(d)]**
3. As an alternative to keeping records at the terminal of each gasoline or VOC cargo tank test results as required in 40 CFR §60.505(a), (c), (d), and §63.11094(b), the Permittee may comply with one of the following requirements: **[Authority: 40 CFR §60.505(e)(1), §63.11088(f), and §63.11094(c)(1) and (2)]**

(a) An electronic copy of each record is instantly available at the terminal. **[Authority: 40 CFR §60.505(e)(1) and §63.11094(c)(1)]**

(i) The copy of each record in paragraph §60.505(e)(1) and 40 CFR §63.11094(c)(1) is an exact duplicate image of the original paper record with certifying signatures. **[Authority: 40 CFR §60.505(e)(1)(i) and §63.11094(c)(1)(i)]**

(ii) The Department is notified in writing that each terminal using this alternative is in compliance with paragraph §60.505(e)(1) and §63.11094(c)(1). **[Authority: 40 CFR §60.505(e)(1)(ii) and §63.11094(c)(1)(ii)]**

OR

(b) For facilities that utilize a terminal automation system to prevent gasoline or VOC 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 Department representatives during the course of a site visit, or within a mutually agreeable time frame. **[Authority: 40 CFR §60.505(e)(2) and §63.11094(c)(2)]**

(i) The copy of each record in 40 CFR §60.505(e)(2) and §63.11094(c)(2) is an exact duplicate image of the original paper record with certifying signatures. **[Authority: 40 CFR §60.505(e)(2)(i) and §63.11094(c)(2)(i)]**

(ii) The Department is notified in writing that each terminal using this alternative is in compliance with 40 CFR §60.505(e)(2)

**Table IV – 4 (Truck Loading Rack)**

and §63.11094(c)(2). **[Authority: 40 CFR §60.505(e)(2)(ii) and §63.11094(c)(2)(ii)]**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

1. To demonstrate compliance with the leak detection requirements under 40 CFR §63.11089, the Permittee shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. If the Permittee elects to implement an instrument program under §63.11089, the record shall include a full description of the program. **[Authority: 40 CFR §63.11094(d)]**
2. The Permittee shall maintain monthly leak inspection records consisting of each detection of a total organic compounds liquid or vapor leak from the vapor collection system, the vapor processing system, and each loading rack handling gasoline. The inspection records shall include, as a minimum, the following information: **[Authority: 40 CFR §60.502(j), §60.505(c), and §63.11094(e)]**
  - (a) Date of inspection.
  - (b) The equipment type and identification number.
  - (c) Findings: may indicate no leaks discovered; or location, nature of the leak (i.e., vapor or liquid), and severity of each leak.
  - (d) Leak determination method (i.e., sight, sound, or smell).
  - (e) The date the leak was detected, the date of each attempt to repair the leak, and reasons for any repair interval in excess of fifteen (15) days.
  - (f) Repair methods applied in each attempt to repair the leak.
  - (g) The expected date of successful repair of the leak if the leak is not repaired within 15 days.
  - (h) The date of successful repair of the leak.
  - (i) Inspector name and signature.
3. The Permittee shall maintain monthly records of the back pressure readings in the vapor collection system during the loading of tank trucks. **[Authority: See Indicator 3 of CAM Plan, Table IV-5]**

**D. Control of VOC and HAP (Design and Operational Requirements)**

The vapor collection and control system is designed to operate as required. **[Authority: COMAR 26.11.02.09A]**

**Table IV – 4 (Truck Loading Rack)**

**4.5 Reporting Requirements:**

**A. Control of VOC and HAP (Vapor Collection and Control Requirements)**

1. The Permittee shall report all deviations from Indicator 1 and Indicator 4 of the CAM Plan requirements as specified in the CAM Plan for the VRU. The Permittee shall submit these deviations with the semiannual monitoring report. **[Authority: See Indicator 1 and Indicator 4 of the CAM Plan, Table IV-5 and COMAR 26.11.03.06C]**
2. The Permittee shall submit an excess emissions report to the Department. The excess emissions report shall be submitted as a part of the semiannual compliance report. The excess emissions report shall include the following information: **[Authority: 40 CFR §63.8(c)(8), §63.11088(f), and §63.11095(b)]**
  - (a) Each instance of non-vapor-tight gasoline cargo tank loading which failed to assure that such cargo tank would not be reloaded before vapor tightness documentation was obtained.
  - (b) Each reloading of a non-vapor-tight gasoline cargo tank before vapor tightness documentation is obtained in accordance with 40 CFR §63.11094(b).
  - (c) Each exceedance or failure to maintain the monitored operating parameter value determined under 40 CFR §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 system or the CMS.
  - (d) Each instance in which malfunctions discovered during the monitoring and inspections required under 40 CFR §63.11092(b)(1)(i)(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.
  - (e) For each occurrence of an equipment leak for which no repair attempt was made within five (5) days or for which repair was not

**Table IV – 4 (Truck Loading Rack)**

completed within 15 days after detection:

- (i) The date on which the leak was detected.
- (ii) The date on each attempt to repair the leak.
- (iii) The reasons for the delay of repair.
- (iv) The date of successful repair.

(3) The Permittee 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 the Permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.11085(a), including actions taken to correct a malfunction. The report shall be submitted as a part of the semiannual compliance report. **[Authority: 40 CFR §63.11088(f) and §63.11095(d)]**

**B. Control of VOC and HAP (Vapor Tight Tank Truck Requirements)**

The Permittee shall notify the owner or operator of each non-vapor-tight gasoline or VOC tank truck loaded at the facility within one (1) week of the documentation cross-check required by 40 CFR §60.502(e)(3), or within three (3) weeks after the loading has occurred. **[Authority: 40 CFR §60.502(e)(4), §63.11088(a), and Table 2 of 40 CFR, Part 63, Subpart BBBBBB, Item 1(d)]**

The Permittee shall submit to the Department semiannual compliance reports that include each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility. **[Authority: 40 CFR §63.11088(f), §63.11095(a), and §63.11095(a)(2)]** This report shall be submitted along with the semiannual monitoring report.

The Permittee shall submit to the Department upon request copies of certification test records from the leak-tight conditions tests required under COMAR 26.11.13.04A(3)(a). **[Authority: COMAR 26.11.13.05D(1)(b)]**

**Table IV – 4 (Truck Loading Rack)**

**C. Control of VOC and HAP (Back Pressure and Leak Requirements)**

The Permittee shall report all deviations from Indicators 2 and 3 of the CAM Plan requirements as specified in the CAM Plan for vapor line back pressure and equipment leaks. The Permittee shall submit these deviations with the semiannual monitoring report. **[Authority: See Indicators 2 and 3 of the CAM Plan, Table IV-4]**

The Permittee shall submit to the Department semiannual compliance reports that include the number of equipment leaks not repaired within 15 days after detection. **[Authority: 40 CFR §63.11088(f) and §63.11095(a)(3)]** These reports shall be submitted with the semiannual monitoring report.

**D. Control of VOC and HAP (Design and Operational Requirements)**

The vapor collection and control system is designed to operate as required. **[Authority: COMAR 26.11.02.09A]**

The Permittee shall submit notifications specified in 40 CFR §63.9 as applicable. **[Authority: 40 CFR §63.11087(d), §63.11093(d), and §63.9]**





MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-5 General Reference: COMAR 26.11.13.03B

Briefly describe the Emission Standard/Limit or Operational Limitation:

See Attachment to Section 3B

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: \_\_\_\_\_

X Annual Compliance Certification: \_\_\_\_\_

Semi-Annual Monitoring Report: \_\_\_\_\_

Methods used to demonstrate compliance:

Monitoring: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Testing: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Record Keeping: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Reporting: Reference \_\_\_\_\_ Describe: See Attachment to Section 3B

Frequency of submittal of the compliance demonstration: COMAR 26.11.03.06 C(7)





SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: EU-5

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Operating Scenario #2: The tanks may be used for the storage of fuel oils. During the storage period involving the fuel oil the tanks are not subject to the control requirements of COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE  
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN  
ALTERNATE OPERATING SCENARIO

Scenario No.: 2

Emissions Unit No.: EU-5 General Reference: COMAR 26.11.03.06

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

During the storage of fuel oil the tanks are not subject to COMAR 26.11.13 (Control of Gasoline and VOC Storage and Handling).

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference NA Describe: \_\_\_\_\_

Testing: Reference NA Describe: \_\_\_\_\_

Record Keeping: Reference COMAR 26.11.03.06(9) Describe: Maintain a log detailing the scenario under which the tanks are operating and the date and time that the scenario started and ended.

Reporting: Reference \_\_\_\_\_ Describe: \_\_\_\_\_

Frequency of submittal of the compliance demonstration: NA

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

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**SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS**

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	VOC	HAP	CO	NOx
CAS Number				
Emission Unit				
EU-1	0.002		0.03	0.12
EU-2	6.73	0.35	NA	NA
EU-3	26.96	1.41	NA	NA
EU-4	72.0	3.16	NA	NA
EU-5	28.56	1.49	NA	NA
Fugitive Emissions	0.21	0.011	NA	NA
Total	134.463	6.421	0.03	0.12



SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

NA

2. Brief Description:

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3. Reasons for Proposed Exemption or Justification of Non-applicability:

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MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

1. Emissions Unit #	Anticipated Compliance Date
Applicable Federally Enforceable Requirement being Violated: NA	

2. Description of Plan to Achieve Compliance:  _____  _____  _____  _____  _____
--

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.



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MARYLAND DEPARTMENT OF THE ENVIRONMENT

STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: Center Point Terminal Baltimore, LLC County: Baltimore
Premises Number:
Street Address: 3100 Vera Street, Baltimore, MD 21226
24-hour Emergency Telephone Number for Air Pollution Matters: 410-652-2832
Type of Equipment (List Significant Units):
Five Floating Roof Storage Tanks
Five Ethanol Storage Tanks
Truck Load-Out Rack with VCU

MARYLAND DEPARTMENT OF THE ENVIRONMENT

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-  
ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 510-0730-9-0997/510-0730-9-1075

Emissions Unit No.: Source-Wide General Reference: \_\_\_\_\_

Briefly describe the requirement and the emissions limit (if applicable):

See Permit Attachment

Methods used to demonstrate compliance:

Record Keeping and Reporting



## **SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS**

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

- (A) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (B) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
- (C) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

### III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

#### Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

- (1) No.   1   Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;
- (2) No.    Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;
- (3) No.    Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output
- (4)    Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (5)    Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (6) No.    Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;
- (7)    Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (8)    Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (9)    Confection cookers where the products are edible and intended for human consumption;
- (10)    Die casting machines;
- (11)    Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (12)    Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

- (13) \_\_\_ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) \_\_\_ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15) \_\_\_ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) \_\_\_ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
  - (b) \_\_\_ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
  - (c) \_\_\_ Storage of butane, propane, or liquefied petroleum, or natural gas;
  - (d) No. \_\_\_ Storage of lubricating oils;
  - (e) No. \_\_\_ Unheated storage of VOC with an initial boiling point of 300 °F (
  - (f) No. <sup>4</sup> \_\_\_ Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
  - (g) No. \_\_\_ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
  - (h) No. \_\_\_ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (17) \_\_\_ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

- (a) \_\_\_ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
  - (b) \_\_\_ Magnesium or any alloy containing over 50 percent magnesium;
  - (c) \_\_\_ Lead or any alloy containing over 50 percent lead;
  - (d) \_\_\_ Tin or any alloy containing over 50 percent tin;
  - (e) \_\_\_ Zinc or any alloy containing over 50 percent zinc;
  - (f) \_\_\_ Copper;
  - (g) \_\_\_ Precious metals;
- (19) \_\_\_ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) \_\_\_ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) \_\_\_ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) \_\_\_ Potable water treatment equipment, not including air stripping equipment;
- (23) \_\_\_ Firing and testing of military weapons and explosives;
- (24) \_\_\_ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) \_\_\_ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) \_\_\_ Grain, metal, or mineral extrusion presses;
- (27) \_\_\_ Breweries with an annual beer production less than 60,000 barrels;

(28) \_\_\_ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) \_\_\_ Laboratory fume hoods and vents;

(30) No. \_\_\_ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

*For the following, attach additional pages as necessary:*

(31) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No.   1        28,900 gallon horizontal storage tank for fuel additive

No.   1        13,400 gallon horizontal storage tank for diesel lubricity additive

No.   1        10,000 gallon horizontal storage tank for gasoline additive

No.           \_\_\_\_\_

No.           \_\_\_\_\_

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No.           \_\_\_\_\_

No.           \_\_\_\_\_

No.           \_\_\_\_\_

**Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)**

Part 64 Requirement	Indicator No. 1
I. Indicator 64.4(a)(1)	Carbon Bed Regeneration Vacuum
Monitoring Approach	Vacuum gauge.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the vacuum gauge does not reach 25 inches of mercury or greater during a daily inspection or fails to hold at 25 inches or greater for at least three (3) minutes during a weekly inspection. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions will be reported to the ARMA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The vacuum gauge is located on the VRU piping, approximately two (2) feet from the shell of each carbon bed vessel. The minimum accuracy of the vacuum gauge is +/- 2.0 percent.
B. Verification of Operational Status	Daily visual check with manual log entry.
C. QA/QC Practices and Criteria	Preventative maintenance is performed on vacuum regeneration gauge four (4) times per year and is calibrated annually.
D. Monitoring Frequency	The entire regeneration cycle will be monitored weekly. Once daily when the VRU is in operation, the vacuum pressure will be observed and recorded.
E. Data Collection	Weekly and daily visual readings when the VRU is in operation with manual log entry of readings.
F. Averaging Period	None.

**Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)**

<b>Part 64 Requirement</b>	<b>Indicator No. 2</b>
I. Indicator 64.4(a)(1)	Equipment Leaks
Monitoring Approach	Monthly leak check of vapor recovery system by sight, sound, and smell.
II. Indicator Range 64.4(a)(2)	An excursion is defined as detection of a leak by sight, sound, or smell. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All excursions and corrective actions taken shall be reported to the ARMA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	The terminal operations personnel will be trained on the procedures to detect leaks, record results, and initiate corrective actions.
B. Verification of Operational Status	Not Applicable.
C. QA/QC Practices and Criteria	The operations' personnel responsible for performing the monthly inspections will be trained on the procedures to follow. The terminal will maintain a record of employees trained to perform the inspections.
D. Monitoring Frequency	Monthly.
E. Data Collection	Manual records of inspections, leaks found, and leaks repaired.
F. Averaging Period	Not Applicable.

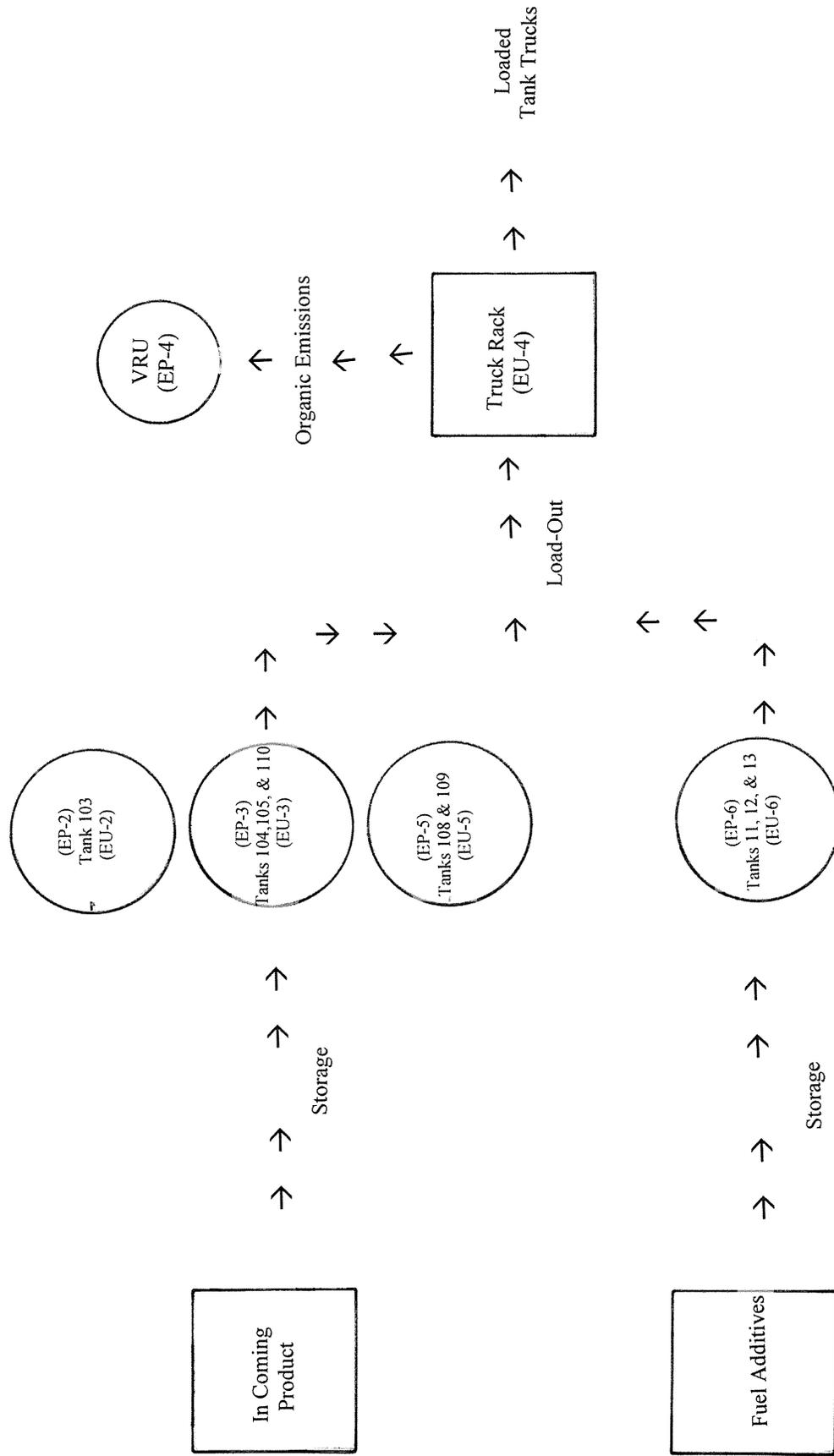
**Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)**

<b>Part 64 Requirement</b>	<b>Indicator No. 3</b>
I. Indicator 64.4(a)(1)	Vapor Collection Line Back Pressure
Monitoring Approach	Pressure gauge reading when trucks are being loaded.
II. Indicator Range 64.4(a)(2)	An excursion is defined as when the pressure gauge reading shows back pressure to be greater than 18 inches of water column. An excursion will trigger an investigation, corrective action, and a reporting requirement.
Reporting Threshold	All pressure gauge readings greater than 18 inches will be reported to the ARMA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	A pressure gauge that is attached to a spool piece is inserted between the vapor line connection of the tanker and the connection for the terminal's vapor collection line measures back pressure. The gauge measures pressure within +/- 0.1 inch of water column.
B. Verification of Operational Status	Monthly visual check on each loading bay with manual log entry.
C. QA/QC Practices and Criteria	Preventative maintenance is performed on back pressure gauge four times per year and is calibrated or replaced at least once a year.
D. Monitoring Frequency	Monthly.
E. Data Collection	Monthly reading with manual log entry.
F. Averaging Period	Not Applicable.

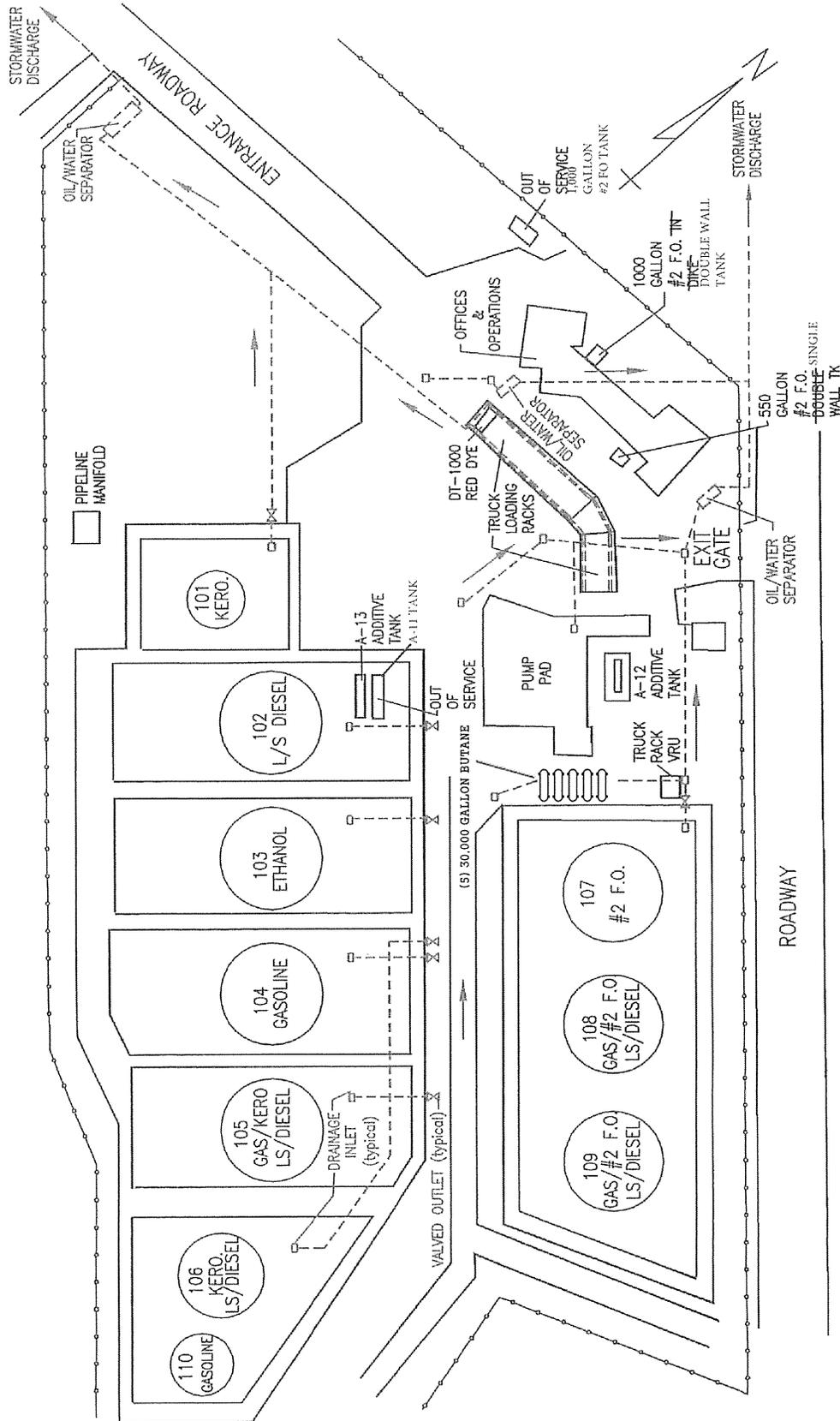
**Table IV-5 (CAM Plan for Vapor Recovery Unit VRU)**

<b>Part 64 Requirement</b>	<b>Indicator No. 4</b>
I. Indicator 64.4(a)(1)	Documentation of preventative maintenance.
Monitoring Approach	Proper VRU operation is verified by performing preventative maintenance as recommended by the VRU manufacturer four (4) times a year.
II. Indicator Range 64.4(a)(2)	An excursion occurs if the preventative maintenance is not performed or documented.
Reporting Threshold	All excursions will be reported to the ARMA in the semi-annual monitoring reports.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	VRU operation verified by trained personnel or service person using a preventative maintenance checklist that is based on recommendations provided by the VRU manufacturer.
B. Verification of Operational Status	Not applicable.
C. QA/QC Practices and Criteria	Service persons are trained on inspection and maintenance procedures.
D. Monitoring Frequency	Preventative maintenance will be performed four (4) times during a calendar year.
E. Data Collection	Results of inspection and maintenance performed during preventative maintenance are manually recorded and maintained on site.
F. Averaging Period	Not Applicable.

**Figure 1 – Process Flow Diagram  
Petroleum Fuel & Terminal Company**



Key:  
 (EP-2) – Emission Point  
 (EU-2) – Emission Unit



**PETROLEUM FUEL & TERMINAL CO.  
BALTIMORE NORTH TERMINAL  
SPCC - FACILITY DIAGRAM**

Annotated by Gannett Fleming, 12/18/2013  
 PREPARED BY ROY SULLIVAN  
 12/30/2008  
 NOT TO SCALE

MARYLAND DEPARTMENT OF THE ENVIRONMENT  
 1800 Washington Boulevard, Suite 715 Baltimore Maryland 21230-1720  
 410-537-3000 1-800-633-6101 <http://www.mde.state.md.us>  
 Air and Radiation Management Administration  
 Air Quality Compliance Program  
 410-537-3220

**FORM 1:**

**GENERAL FACILITY INFORMATION**  
**EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2018

A. FACILITY IDENTIFICATION				Do Not Write in This Space	
Name		Petroleum Fuel & Terminal Co.		Date Received Regional	
Address		5101 Erdman Avenue		Date Received State	
City	Baltimore	County	Baltimore City	Zip Code	21205
B. Briefly describe the major function of the facility				AIRS Code	
Petroleum bulk storage and distribution.				FINDS Code	
				SIC Code	
				Facility Number:	
				TEMPO ID:	
C. SEASONAL PRODUCTION (% if applicable)				Reviewed by:	
<u>Winter (Dec.-Feb.)</u>		<u>Spring (Mar - May)</u>		<u>Summer (Jun - Aug)</u>	
<u>25</u>		<u>25</u>		<u>25</u>	
				<u>Fall (Sept - Nov)</u>	
				<u>25</u>	
				Name	
D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.					
N/A					
E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)					
Control Device		Capture Efficiency		Removal	
John Zinc Hydrocarbon Absorption/		90%		98.6%	
Adsorption Vapor Recovery Unit					

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 32 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Bernie Sheil Compliance Manager 3-28-19  
 Name (Print/Type) Title Date  
 Signature Bernie Sheil 314-889-9652  
 Telephone







**FORM 2:**

**CRITERIA AIR POLLUTANTS  
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2018

Facility Name: Petroleum Fuel and Terminal Company

Facility ID: 510-00677

Pollutant: SO2

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD Lbs/dy	Operating Schedule		Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr		Days/yr	Hrs/dy	
4-0293	10200402	No. 2	S 0.1633	1.6333	24	7	30	200	0		C3
		E.O.	F 0	0					0		
4-3049	10200402	No. 2	S 0.0466	0.4656	24	7	30	200	0		C3
		E.O.	F 0	0							
4-0784	40400210	Gas/	S 0	0	24	7	52	365	24		C3
		Ethanol	F 0	0							
			S								
			F								
			S								
			F								
			S								
			F								
			S								
			F								
			S								
			F								
<b>Total</b>				<b>0.2099</b>	<b>2.0989</b>				<b>0</b>		

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other. Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by best guess/engineering Judgment
- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standard





**FORM 5:**

**BILLABLE TOXIC AIR POLLUTANTS**

Calendar Year: 2018

**Emissions Certification Report**

Facility Name: Petroleum Fuel & Terminal Company Facility ID#: S10-00677

Chemical Name	CAS Number	Actual Emissions			Estimation Method
		Tons/year	Lbs/day	Lbs/hr	
carbon disulfide	75-15-0	S	0	0	C3
		F	0	0	C3
carbonyl sulfide	463-58-1	S	0	0	C3
		F	0	0	C3
chlorine	7782-50-5	S	0	0	C3
		F	0	0	C3
cyanide compounds	57-12-5	S	0	0	C3
		F	0	0	C3
hydrochloric acid	7647-01-0	S	0	0	C3
		F	0	0	C3
hydrogen fluoride	7664-39-3	S	0	0	C3
		F	0	0	C3
methyl chloroform	71-55-6	S	0	0	C3
		F	0	0	C3
methylene chloride	75-09-2	S	0	0	C3
		F	0	0	C3
perchloroethylene	127-18-4	S	0	0	C3
		F	0	0	C3
phosphine	7803-51-2	S	0	0	C3
		F	0	0	C3
titanium tetrachloride	7550-45-0	S	0	0	C3
		F	0	0	C3
<b>TOTALS</b>		0	0	0	

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

**Emission Estimation Method**

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify
- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3-User calculated based on AP-42
- C4-User calculated by engineering judgment
- C5-User calculated based on a State or local agency factor
- C6-New construction, not operational
- C7-Source closed, operation ceased
- C8-Computer calculated based on standards

This form is to include only the chemicals identified

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.



FORM 6: Greenhouse Gases

GREENHOUSE GAS AIR POLLUTANTS

Calendar Year: 2018

EMISSIONS CERTIFICATION REPORT

Facility Name: Petroleum Fuel & Terminal Company Facility ID: 510-00677 Pollutant: CH4 \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
4-0293	0.0002	0.0020	0.0001
4-3049	0.00006	0.0006	0.00002
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
TOTALS	0.00026	0.0026	0.00012

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO2)
- methane (CH4)
- nitrous oxide (N2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF6)

\* Use a separate form for each pollutant.  
\* Please attach all calculations.

<sup>1</sup>Emissions must be broken down by equipment registration number (ex 9-0076, 9-0077)

FORM 6: Greenhouse Gases

GREENHOUSE GAS AIR POLLUTANTS

Calendar Year: 2018

EMISSIONS CERTIFICATION REPORT

Facility Name: Petroleum Fuel & Terminal Company Facility ID: 510-00677 Pollutant: N2O \*

Equipment Description/ Registration Number <sup>1</sup>	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
-----4-0293-----	0.0004	0.0042	0.0002
-----4-3049-----	0.0001	0.0012	0.0001
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
-----			
TOTALS	0.0005	0.0054	0.0003

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO2)
- methane (CH4)
- nitrous oxide (N2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF6)

\* Use a separate form for each pollutant.  
\* Please attach all calculations.

<sup>1</sup>Emissions must be broken down by equipment registration number (ex 9-0076, 9-0077)

## **VI .Application Completeness Checklist**

The purpose of this part is to list the information required to achieve a Part 70 application shield.

### **Cover Page**

- (x) Name and address of owner or operator, including telephone number.
- (x) Name and address of facility, including the plant manager's name and telephone number.
- (x) A 24-hour emergency telephone number for air pollution matters.

### **Section 1 CERTIFICATION STATEMENTS**

- (x) The certification statement completed and signed by a responsible official.

### **Section 2 FACILITY DESCRIPTION SUMMARY**

- (x) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- (x) Flow diagrams indicating all emissions units, emission points, and control devices.
- (x) A plot plan of the entire facility.
- (x) Emission Certification Report.
- (x) General Emissions Information.

### **Section 3 EMISSIONS UNIT DESCRIPTIONS –**

This section must be completed for each emissions unit.

#### **Part A**

- (x) Emissions unit number.
- (x) Detailed description of unit, including all emission points.
- (x) Federally enforceable limit(s) on the operating schedule.

- (x) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

**Part B**

- (x) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- (x) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (x) The frequency of submittal of the compliance demonstration during the permit term.

**Part C**

- (x) Emissions unit number.
- (x) Permit to construct number.
- (x) Emissions point number(s).
- (x) Date(s) the permit to construct was issued.
- (x) Condition number(s) as indicated on the permit to construct.
- (x) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

**Part D**

- (x) Description of all alternate operating scenarios that apply to an emissions unit.
- (x) Number assigned to each scenario.
- (x) Emissions unit number.
- (x) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

## **Part E**

- (x) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.
- (x) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.
- (x) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (x) The frequency of submittal of the compliance demonstration during the permit term.

### **Section 4 CONTROL EQUIPMENT**

- (x) The type of each piece of air pollution control equipment
- (x) The capture and control efficiencies of the control equipment.

### **Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS**

- (x) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.
- (x) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.
- (x) Basis for all emission calculations.

### **Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS**

- (x) An explanation of the proposed exemption.

### **Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS**

- ( ) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.
- ( ) Detailed description of methods to be used to achieve compliance.
- ( ) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

**Attachment**

- () Checklist of Insignificant Activities
- () CAM Plan (If Applicable)

# **Attachment B**

## **Table of Contents**

Oil Fired Boiler Emission Calculation Sheet

Tanks Report- Tank 103

Tanks Report- Tank 104

Tanks Report- Tank 105

Tanks Report- Tank 108

Tanks Report- Tank 109

Tanks Report- Tank 110

Emission Worksheet – Roof Landing - Tank 103

Emission Worksheet – Roof Landing - Tank 104

Emission Worksheet – Roof Landing - Tank 105

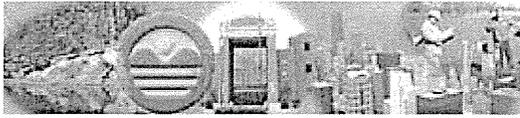
Emission Worksheet – Roof Landing - Tank 108

Emission Worksheet – Roof Landing - Tank 109

Emission Worksheet – Roof Landing - Tank 110

Emission Worksheet – Truck Rack

Emission Worksheet – Fugitive Emissions from Equipment Components



## Calculate Emissions



- | [AER Home](#) | [Addresses & Contacts](#) | [Links](#) | [FAQ](#) |
- | [Instructions & Downloads](#) | [Calculate Emissions](#) |
- | [Reference Tables](#) | [News & Items of Interest](#) |

# Oil Fired Boiler

## Production Information

Fuel oil type

Sulfur content  weight percent

Ash content  weight percent

Amount of fuel burned

## Emissions (tons/year)

CO	NH3	NOX	PART	PM10	PM2.5
0.0300	0.0048	0.1200	0.0120	0.0060	0.0015
SO2	VOM	CO2	METHANE	N2O	
0.2556	0.0015	133.8000	0.0003	0.0007	

[Return to Calculate Emissions page](#)

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

**Identification**  
 User Identification: Balt. North Tank 80-103  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 120.00  
 Volume (gallons): 3,360,000.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): Y  
 No. of Columns: 0.00  
 Eff. Col. Diam. (ft): 0.00

**Paint Characteristics**  
 Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**  
 Primary Seal: Liquid-mounted  
 Secondary Seal: Rim-mounted

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	41
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

**TANKS 4.0.9d**

## Emissions Report - Detail Format Liquid Contents of Storage Tank

### Balt. North Tank 80-103 - Internal Floating Roof Tank

Mixture/Component	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline (RVP 15.0)	56.82	51.74	61.91	55.11	7.6856	N/A	N/A	60.0000			92.00	Option 4; RVP=15, ASTM Slope=3

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

### Balt. North Tank 80-103 - Internal Floating Roof Tank

Annual Emission Calculations

```

Rim Seal Losses (lb): 396.0585
Seal Factor A (lb-mole/ft-yr): 0.3000
Seal Factor B (lb-mole/ft-yr (mph)1/2): 0.6000
Value of Vapor Pressure Function: 0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 7.6856
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Withdrawal Losses (lb): 126.7392
Number of Columns: 0.0000
Effective Column Diameter (ft): 0.0000
Annual Net Throughput (gal/yr.): 80,640,000.0000
Shell Clingage Factor (bbl/1000 sqft): 0.0015
Average Organic Liquid Density (lb/gal): 5.6000
Tank Diameter (ft): 120.0000

Deck Fitting Losses (lb): 3,812.0630
Value of Vapor Pressure Function: 0.1834
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
Tot. Roof Fitting Loss Fact. (lb-mole/yr): 346.5000

Deck Seam Losses (lb): 0.0000
Deck Seam Length (ft): 0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.0000
Deck Seam Length Factor (ft/sqft): 0.0000
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Total Losses (lb): 4,334.8607
    
```

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors Kfb(lb-mole/yr mph <sup>1/2</sup> )	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Roof Leg or Hanger Well/Adjustable	41	7.90	0.00	0.00	3,563.4263
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

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

**Emissions Report for: Annual**

**Balt. North Tank 80-103 - Internal Floating Roof Tank**

		Losses (lbs)			
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15.0)	396.06	126.74	3,812.06	0.00	4,334.86

# TANKS 4.0.9d

## Emissions Report - Detail Format

### Tank Identification and Physical Characteristics

**Identification**  
 User Identification: Balt. North Tank 80-104  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 120.00  
 Volume (gallons): 3,384,100.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): Y  
 No. of Columns: 0.00  
 Eff. Col. Diam. (ft): 0.00

**Paint Characteristics**  
 Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**  
 Primary Seal: Mechanical Shoe  
 Secondary Seal: None

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	41
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

### TANKS 4.0.9d

## Emissions Report - Detail Format Liquid Contents of Storage Tank

### Balt. North Tank 80-104 - Internal Floating Roof Tank

Mixture/Component	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline (RVP 15.0)	56.82	51.74	61.91	55.11	7.6856	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

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

### Balt. North Tank 80-104 - Internal Floating Roof Tank

Annual Emission Calculations

```

Rim Seal Losses (lb): 7,657.1308
Seal Factor A (lb-mole/ft-yr): 5.8000
Seal Factor B (lb-mole/ft-yr (mph)*n): 0.3000
Value of Vapor Pressure Function: 0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 7.6856
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Withdrawal Losses (lb): 127.6483
Number of Columns: 0.0000
Effective Column Diameter (ft): 0.0000
Annual Net Throughput (gal/yr.): 81,218,400.0000
Shell Clingage Factor (bb/1000 sqft): 0.0015
Average Organic Liquid Density (lb/gal): 5.6000
Tank Diameter (ft): 120.0000

Deck Fitting Losses (lb): 3,812.0630
Value of Vapor Pressure Function: 0.1834
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
Tot. Roof Fitting Loss Fact (lb-mole/yr): 346.5000

Deck Seam Losses (lb): 0.0000
Deck Seam Length (ft): 0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.0000
Deck Seam Length Factor(ft/sqft): 0.0000
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
    
```

Total Losses (lb): 11,596.8421

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFa(lb-mole/yr mpir*in)	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Roof Leg or Hanger Well/Adjustable	41	7.90	0.00	0.00	3,563.4263
Sample Pipe or Well (24-in. Diam.)/Silt Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

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

**Emissions Report for: Annual**

**Balt: North Tank 80-104 - Internal Floating Roof Tank**

		Losses(lbs)			
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15.0)	7,657.13	127.65	3,812.06	0.00	11,596.84

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

**Identification**  
 User Identification: Balt. North Tank 80-105  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 120.00  
 Volume (gallons): 3,384,100.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): Y  
 No. of Columns: 0.00  
 Eff. Col. Diam. (ft): 0.00

**Paint Characteristics**  
 Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**  
 Primary Seal: Mechanical Shoe  
 Secondary Seal: None

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	41
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

### TANKS 4.0.9d

## Emissions Report - Detail Format Liquid Contents of Storage Tank

### Balt. North Tank 80-105 - Internal Floating Roof Tank

Mixture/Component	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline (RVP 15.0)	56.82	51.74	61.91	55.11	7.6856	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

# TANKS 4.0.9d

## Emissions Report - Detail Format

### Detail Calculations (AP-42)

#### Balt. North Tank 80-105 - Internal Floating Roof Tank

Annual Emission Calculations

```

Rim Seal Losses (lb): 7,657.1308
Seal Factor A (lb-mole/ft-yr): 5.8000
Seal Factor B (lb-mole/ft-yr (mph)1/2): 0.3000
Value of Vapor Pressure Function: 0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 7.6856
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Withdrawal Losses (lb): 127.6483
Number of Columns: 0.0000
Effective Column Diameter (ft): 0.0000
Annual Net Throughput (gal/yr.): 81,218,400.0000
Shell Clingage Factor (bbbl/1000 sqft): 0.0015
Average Organic Liquid Density (lb/gal): 5.6000
Tank Diameter (ft): 120.0000

Deck Fitting Losses (lb): 3,812.0630
Value of Vapor Pressure Function: 0.1834
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
Tot. Roof Fitting Loss Fact. (lb-mole/yr): 346.5000

Deck Seam Losses (lb): 0.0000
Deck Seam Length (ft): 0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.0000
Deck Seam Length Factor (ft/sqft): 0.0000
Tank Diameter (ft): 120.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Total Losses (lb): 11,596.8421
    
```

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFB(lb-mole/yr mph <sup>1/2</sup> )	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Roof Leg or Hanger Well/Adjustable	41	7.90	0.00	0.00	3,563.4263
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

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

**Emissions Report for: Annual**

**Balt. North Tank 80-105 - Internal Floating Roof Tank**

		Losses(lbs)			
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15.0)	7,657.13	127.65	3,812.06	0.00	11,596.84

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

**Identification**  
 User Identification: Balt. North Tank 130-108  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 140.00  
 Volume (gallons): 5,460,000.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): Y  
 No. of Columns: 0.00  
 Eff. Col. Diam. (ft): 0.00

**Paint Characteristics**  
 Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**  
 Primary Seal: Mechanical Shoe  
 Secondary Seal: None

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	52
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

**TANKS 4.0.9d**

## Emissions Report - Detail Format Liquid Contents of Storage Tank

### Balt. North Tank 130-108 - Internal Floating Roof Tank

Mixture/Component	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Month	Avg.	Min.		Max.	Avg.	Min.					
Gasoline (RVP 15.0)	All	56.82	51.74	61.91	55.11	7.6856	N/A	N/A	60.0000	92.00	Option 4: RVP=15, ASTM Slope=3	

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

### Balt. North Tank 130-108 - Internal Floating Roof Tank

Annual Emission Calculations

```

Rim Seal Losses (lb): 8,933.3193
Seal Factor A (lb-mole/ft-yr): 5.8000
Seal Factor B (lb-mole/ft-yr) (mph*yr): 0.3000
Value of Vapor Pressure Function: 0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 7.6656
Tank Diameter (ft): 140.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Withdrawal Losses (lb): 176.5296
Number of Columns: 0.0000
Effective Column Diameter (ft): 0.0000
Annual Net Throughput (gal/yr): 131,040,000.0000
Shell Clingage Factor (bb/1000 sqft): 0.0015
Average Organic Liquid Density (lb/gal): 5.6000
Tank Diameter (ft): 140.0000

Deck Fitting Losses (lb): 4,768.1042
Value of Vapor Pressure Function: 0.1834
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
Tot. Roof Fitting Loss Fact (lb-mole/yr): 433.4000

Deck Seam Losses (lb): 0.0000
Deck Seam Length (ft): 0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.0000
Deck Seam Length Factor(ft/scft): 0.0000
Tank Diameter (ft): 140.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
    
```

Total Losses (lb): 13,877.9531

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFa(lb-mole/yr mph*yr)	m	Losses(lb)
---------------------	----------	-----------------	--	---	------------

Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Roof Leg or Hanger Well/Adjustable	52	7.90	0.00	0.00	4,519.4675
Sample Pipe or Well (24-in. Diam.)/Silt Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

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

**Emissions Report for: Annual**

**Balt. North Tank 130-108 - Internal Floating Roof Tank**

		Losses(lbs)			
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15.0)	8,933.32	176.53	4,768.10	0.00	13,877.95

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

**Identification**

User Identification: Balt. North Tank 120-109  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**

Diameter (ft): 134.00  
 Volume (gallons): 5,032,100.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): Y  
 No. of Columns: 0.00  
 Eff. Col. Diam. (ft): 0.00

**Paint Characteristics**

Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**

Primary Seal: Mechanical Shoe  
 Secondary Seal: None

**Deck Characteristics**

Deck Fitting Category: Detail  
 Deck Type: Welded

**Deck Fitting/Status**

	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	49
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

### TANKS 4.0.9d

## Emissions Report - Detail Format Liquid Contents of Storage Tank

### Balt. North Tank 120-109 - Internal Floating Roof Tank

Mixture/Component	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Month	Avg.	Min.		Max.	Avg.	Min.					
Gasoline (RVP 15.0)	All	56.82	51.74	61.91	55.11	7.6856	N/A	60.0000	N/A	N/A	92.00	Option 4; RVP=15, ASTM Slope=3

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

## Balt. North Tank 120-109 - Internal Floating Roof Tank

### Annual Emission Calculations

```

Rim Seal Losses (lb): 8,550.4628
Seal Factor A (lb-mole/ft-yr): 5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n): 0.3000
Value of Vapor Pressure Function: 0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 7.6856
Tank Diameter (ft): 134.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Withdrawal Losses (lb): 169.9798
Number of Columns: 0.0000
Effective Column Diameter (ft): 0.0000
Annual Net Throughput (gal/yr.): 120,770,400.0000
Shell Clingage Factor (lbi/1000 sqft): 0.0015
Average Organic Liquid Density (lb/gal): 5.6000
Tank Diameter (ft): 134.0000

Deck Fitting Losses (lb): 4,507.3657
Value of Vapor Pressure Function: 0.1834
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000
Tot. Roof Fitting Loss Fact. (lb-mole/yr): 409.7000

Deck Seam Losses (lb): 0.0000
Deck Seam Length (ft): 0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.0000
Deck Seam Length Factor(f/sqft): 0.0000
Tank Diameter (ft): 134.0000
Vapor Molecular Weight (lb/lb-mole): 60.0000
Product Factor: 1.0000

Total Losses (lb): 13,227.8083
    
```

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFB(lb-mole/yr mph^n)	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Roof Leg or Hanger Well/Adjustable	49	7.90	0.00	0.00	4,258.7289
Sample Pipe or Well (24-in. Diam.)/Silt Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

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

**Emissions Report for: Annual**

**Balt. North Tank 120-109 - Internal Floating Roof Tank**

		Losses(lbs)			
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15.0)	8,550.46	169.98	4,507.37	0.00	13,227.81

# TANKS 4.0.9d

## Emissions Report - Detail Format

### Tank Identification and Physical Characteristics

**Identification**  
 User Identification: Balt. North Tank 24-110  
 City:  
 State:  
 Company:  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 60.00  
 Volume (gallons): 1,015,266.00  
 Turnovers: 24.00  
 Self Supp. Roof? (y/n): N  
 No. of Columns: 1.00  
 Eff. Col. Diam. (ft): 1.00

**Paint Characteristics**  
 Internal Shell Condition: Light Rust  
 Shell Color/Shade: White/White  
 Shell Condition: Good  
 Roof Color/Shade: White/White  
 Roof Condition: Good

**Rim-Seal System**  
 Primary Seal: Liquid-mounted  
 Secondary Seal: Rim-mounted

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	17
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Baltimore, Maryland (Avg Atmospheric Pressure = 14.67 psia)

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

**Balt. North Tank 24-110 - Internal Floating Roof Tank**

Mixture/Component	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
	Month	Avg.	Min.		Max.	Avg.	Min.					
Gasoline (RVP 15.0)	All	56.82	51.74	61.91	55.11	7.6856	N/A	N/A	60.0000		92.00	Option 4: RVP=15, ASTM Slope=3

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

**Balt. North Tank 24-110 - Internal Floating Roof Tank**

Annual Emission Calculations	
Rim Seal Losses (lb):	198.0292
Seal Factor A (lb-mole/ft-yr):	0.3000
Seal Factor B (lb-mole/ft-yr (mph) <sup>1.5</sup> ):	0.6000
Value of Vapor Pressure Function:	0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.6856
Tank Diameter (ft):	60.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000
Product Factor:	1.0000
Withdrawal Losses (lb):	77.8682
Number of Columns:	1.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	24,366,384.0000
Shell Clingage Factor (bbbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal):	5.6000
Tank Diameter (ft):	60.0000
Deck Fitting Losses (lb):	2,705.2995
Value of Vapor Pressure Function:	0.1834
Vapor Molecular Weight (lb/lb-mole):	60.0000
Product Factor:	1.0000
Tot. Roof Fitting Loss Fact (lb-mole/yr):	245.9000
Deck Seam Losses (lb):	0.0000
Deck Seam Length (ft):	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000
Tank Diameter (ft):	60.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000
Product Factor:	1.0000
<b>Total Losses (lb):</b>	<b>2,981.1970</b>

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors KFB(lb-mole/(yr mph <sup>1.5</sup> n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	17.6026
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	30.8045
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1	33.00	0.00	0.00	363.0536
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	616.0910
Roof Leg or Hanger Well/Adjustable	17	7.90	0.00	0.00	1,477.5182
Sample Pipe or Well (24-in. Diam.)/Silt Fabric Seal 10% Open	1	12.00	0.00	0.00	132.0195
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	68.2101

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**

**Individual Tank Emission Totals**

**Emissions Report for: Annual**

**Balt. North Tank 24-110 - Internal Floating Roof Tank**

		Losses (lbs)			Total Emissions
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	
Gasoline (RVP 15.0)	198.03	77.87	2,705.30	0.00	2,981.20

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-103**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 120 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$L_{TL} = L_{SL} + L_{FL}$$

$$L_{SL} = n_d K_E \left\{ \frac{P V_V}{R T} \right\} M_v K_s$$

$L_{SL}$  = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)  
 $n_d$  = 2  
 $K_E$  = Vapor Space Expansion Factor = 0.85

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V}{T_{LA}} + \frac{\Delta P_V - \Delta P_B}{P_A - P_{VA}} = \frac{343.44}{521.07} + \frac{1.43 - 0.06}{14.7 - 7.68} = 0.85$$

Where:

$\Delta T_V$  = Daily Vapor Temperature Range ( $^{\circ}R$ ) = 17.55  
 $\Delta P_V$  = Daily Vapor Pressure Range ( $^{\circ}R$ ) = 1.43  
 $\Delta P_B$  = Breather Vent Pressure Setting Range (psia) = 0.06  
 $P_A$  = Atmosphere Pressure (psia) = 14.7  
 $P_{VA}$  = Vapor Pressure at Daily Average Liquid Surface Temperature = 7.68  
 $T_{LA}$  = Daily Average Liquid Surface Temperature = 521.07

$P$  = 7.68 psia (from Tanks Report)  
 $V_V$  = Volume of vapor space (ft<sup>3</sup>) = 9,184  
 $R$  = Ideal gas constant (10.731)  
 $T$  = Average temperature of liquid and vapor below IFR ( $^{\circ}R$ )  
 = Average temperature for Baltimore area from Tanks program = 55  $^{\circ}F$  (515 $^{\circ}R$ )  
 $M_v$  = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60  
 $K_s$  = 0.39

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-103**

$\begin{aligned} \text{LSL} &= 2 \times 0.85 \times \frac{7.68 \times 43,294}{10.731 \times 515} \times 60 \times 0.39 \\ &= 1.7 \times 60.2 \times 23.4 \end{aligned}$
$\text{LSL} = 2,395$

$$\text{LFL} = \frac{\{P V_v\}}{\{R T\}} M_v S$$

- LFL = Filling losses
- P = 7.68 psia (from Tanks Report)
- V<sub>v</sub> = Volume of vapor space (ft<sup>3</sup>) = 43,294
- R = Ideal gas constant (10.731)
- T = Average temperature of liquid and vapor below IFR (°R)  
 = Average temperature for Baltimore area from Tanks program = 55 °F (515°R)
- M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60
- S = Filling saturation factor (0.60 for a full liquid heel)

$\begin{aligned} \text{LFL} &= \frac{7.68 \times 43,294}{10.731 \times 515} \times 60 \times 0.6 \\ &= 60.2 \times 36 \\ &= 2,167 \text{ pounds} \end{aligned}$
---

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 2,395 \text{ lb} + 2,167 \text{ lb} \\ &= 4,562 \text{ pounds (2.28 tons)} \end{aligned}$$

Tank Vapor Space Volume (V <sub>v</sub> )	
V <sub>v</sub>	= Is the area formed between the floating roof and the liquid
Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 3 feet 11 inches Product depth = 1 inch h <sub>v</sub> = 3 feet 11 inches – 1 inch = 3 feet 10 inches = 3.83 ft	
V <sub>v</sub>	$\begin{aligned} &= \pi \times r^2 \times h_v = 3.14 \times 60^2 \times 3.83 \text{ ft} \\ &= 43,294 \text{ ft}^3 \end{aligned}$

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-104**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 120 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$L_{TL} = L_{SL} + L_{FL}$$

$$L_{SL} = n_d K_E \left\{ \frac{P V_V}{R T} \right\} M_V K_S$$

$L_{SL}$  = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)

$$n_d = 2$$

$$P = 7.68 \text{ psia (from Tanks Report)}$$

$$V_V = \text{Volume of vapor space (ft}^3\text{)}$$

$$R = \text{Ideal gas constant (10.731)}$$

$$K_E = \text{Vapor Space Expansion Factor} = 0.85$$

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V}{T_{LA}} + \frac{\Delta P_V - \Delta P_B}{P_A - P_{VA}} = \frac{343.44}{521.07} + \frac{1.43 - 0.06}{14.7 - 7.68} = 0.85$$

Where:

$$\Delta T_V = \text{Daily Vapor Temperature Range (}^\circ\text{R)} = 17.55$$

$$\Delta P_V = \text{Daily Vapor Pressure Range (}^\circ\text{R)} = 1.43$$

$$\Delta P_B = \text{Breather Vent Pressure Setting Range (psia)} = 0.06$$

$$P_A = \text{Atmosphere Pressure (psia)} = 14.7$$

$$P_{VA} = \text{Vapor Pressure at Daily Average Liquid Surface Temperature} = 7.68$$

$$T_{LA} = \text{Daily Average Liquid Surface Temperature} = 521.07$$

$$T = \text{Average temperature of liquid and vapor below IFR (}^\circ\text{R)}$$

$$= \text{Average temperature for Baltimore area from Tanks program} = 55 \text{ }^\circ\text{F (515}^\circ\text{R)}$$

$$M_V = \text{Vapor molecular weight of gasoline (from Tanks Report)} = 60$$

$$K_S = 0.28$$

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-104**

$\begin{aligned} \text{LSL} &= 2 \times 0.85 \times \frac{7.68 \times 71,554}{10.731 \times 515} \times 60 \times 0.28 \\ &= 1.7 \times 99.4 \times 16.8 \end{aligned}$
$\text{LSL} = 2,839 \text{ lb}$

LFL = Filling loss during roof landing, lb (Note calculating as gasoline RVP 15)

$$\text{LFL} = \frac{\{P V_v\}}{\{R T\}} M_v S$$

- LFL = Filling losses
- P = 7.68 psia (from Tanks Report)
- V<sub>v</sub> = Volume of vapor space (ft<sup>3</sup>) = 71,554
- R = Ideal gas constant (10.731)
- T = Average temperature of liquid and vapor below IFR (°R)  
 = Average temperature for Baltimore area from Tanks program = 55 °F (515°R)
- M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60
- S = Filling saturation factor (0.60 for a full liquid heel)

$\begin{aligned} \text{LFL} &= \frac{7.68 \times 71,554}{10.731 \times 515} \times 60 \times 0.6 \\ &= 99.4 \times 60 \times 0.6 \\ &= 3,578 \text{ pounds} \end{aligned}$
--

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 2,839 \text{ lb} + 3,578 \text{ lb} \\ &= 6,417 \text{ pounds (3.21 tons)} \end{aligned}$$

Tank Vapor Space Volume (V <sub>v</sub> )	
V <sub>v</sub>	= Is the area formed between the floating roof and the liquid
Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 6 feet 5 inches Product depth = 1 inch h <sub>v</sub> = 6 feet 5 inches – 1 inch = 6 feet 4 inches = 6.33 ft	
V <sub>v</sub>	= pi x r <sup>2</sup> x h <sub>v</sub> = 3.14 x 60 <sup>2</sup> x 6.33 ft
	= 71,554 ft <sup>3</sup>

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-105**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 120 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$L_{TL} = L_{SL} + L_{FL}$$

$$L_{SL} = n_d K_E \left\{ \frac{P V_V}{R T} \right\} M_v K_s$$

$L_{SL}$  = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)

$$n_d = 2$$

$$P = 7.68 \text{ psia (from Tanks Report)}$$

$$V_V = \text{Volume of vapor space (ft}^3\text{)}$$

$$R = \text{Ideal gas constant (10.731)}$$

$$K_E = \text{Vapor Space Expansion Factor} = 0.85$$

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V}{T_{LA}} + \frac{\Delta P_V - \Delta P_B}{P_A - P_{VA}} = \frac{343.44}{521.07} + \frac{1.43 - 0.06}{14.7 - 7.68} = 0.85$$

Where:

$$\Delta T_V = \text{Daily Vapor Temperature Range (}^\circ\text{R)} = 17.55$$

$$\Delta P_V = \text{Daily Vapor Pressure Range (}^\circ\text{R)} = 1.43$$

$$\Delta P_B = \text{Breather Vent Pressure Setting Range (psia)} = 0.06$$

$$P_A = \text{Atmosphere Pressure (psia)} = 14.7$$

$$P_{VA} = \text{Vapor Pressure at Daily Average Liquid Surface Temperature} = 7.68$$

$$T_{LA} = \text{Daily Average Liquid Surface Temperature} = 521.07$$

$$T = \text{Average temperature of liquid and vapor below IFR (}^\circ\text{R)}$$

$$= \text{Average temperature for Baltimore area from Tanks program} = 55^\circ\text{F (515}^\circ\text{R)}$$

$$M_v = \text{Vapor molecular weight of gasoline (from Tanks Report)} = 60$$

$$K_s = 0.28$$

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 80-105**

$$\begin{aligned} \text{LSL} &= 2 \times 0.85 \quad \frac{7.68 \times 71,554}{10.731 \times 515} \quad 60 \times 0.28 \\ &= 1.7 \times 99.4 \times 16.8 \end{aligned}$$

$$\text{LSL} = 2,839 \text{ lb}$$

LFL = Filling loss during roof landing, lb (Note calculating as gasoline RVP 15)

$$\text{LFL} = \frac{\{P V_v\}}{\{R T\}} M_v S$$

LFL = Filling losses

P = 7.68 psia (from Tanks Report)

V<sub>v</sub> = Volume of vapor space (ft<sup>3</sup>) = 71,554

R = Ideal gas constant (10.731)

T = Average temperature of liquid and vapor below IFR (°R)

= Average temperature for Baltimore area from Tanks program = 55 °F (515°R)

M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60

S = Filling saturation factor (0.60 for a full liquid heel)

$$\begin{aligned} \text{LFL} &= \frac{7.68 \times 71,554}{10.731 \times 515} \quad 60 \times 0.6 \\ &= 99.4 \times 60 \times 0.6 \\ &= 3,578 \text{ pounds} \end{aligned}$$

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 2,839 \text{ lb} + 3,578 \text{ lb} \\ &= 6,417 \text{ pounds (3.21 tons)} \end{aligned}$$

Tank Vapor Space Volume (V<sub>v</sub>)

V<sub>v</sub> = Is the area formed between the floating roof and the liquid

Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 6 feet 5 inches

Product depth = 1 inch

h<sub>v</sub> = 6 feet 5 inches – 1 inch = 6 feet 4 inches = 6.33 ft

$$\begin{aligned} \text{V}_v &= \pi \times r^2 \times h_v = 3.14 \times 60^2 \times 6.33 \text{ ft} \\ &= 71,554 \text{ ft}^3 \end{aligned}$$

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 130-108**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 140 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$LTL = LSL + LFL$$

$$LSL = nd \cdot K_E \cdot \left\{ \frac{P \cdot V_V}{R \cdot T} \right\} \cdot M_v \cdot K_s$$

LSL = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)  
 nd = 2  
 K<sub>E</sub> = Vapor Space Expansion Factor = 0.85

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V}{T_{LA}} + \frac{\Delta P_V - \Delta P_B}{P_A - P_{VA}} = \frac{343.44}{521.07} + \frac{1.43 - 0.06}{14.7 - 7.68} = 0.85$$

Where:

$\Delta T_V$  = Daily Vapor Temperature Range (°R) = 17.55  
 $\Delta P_V$  = Daily Vapor Pressure Range (°R) = 1.43  
 $\Delta P_B$  = Breather Vent Pressure Setting Range (psia) = 0.06  
 $P_A$  = Atmosphere Pressure (psia) = 14.7  
 $P_{VA}$  = Vapor Pressure at Daily Average Liquid Surface Temperature = 7.68  
 $T_{LA}$  = Daily Average Liquid Surface Temperature = 521.07

P = 7.68 psia (from Tanks Report)  
 V<sub>V</sub> = Volume of vapor space (ft<sup>3</sup>) = 82,007  
 R = Ideal gas constant (10.731)  
 T = Average temperature of liquid and vapor below IFR (°R)  
 = Average temperature for Baltimore area from Tanks program = 55 °F (515°R)  
 M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60  
 K<sub>s</sub> = 0.32

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 130-108**

$$\begin{aligned} \text{LSL} &= 2 \times 0.85 \times \frac{7.68 \times 82,007}{10.731 \times 515} \times 60 \times 0.32 \\ &= 1.7 \times 114 \times 19.2 \\ \text{LSL} &= 3,720 \text{ lb} \end{aligned}$$

$$\text{LFL} = \frac{\{P V_v\}}{\{R T\}} M_v S$$

LFL = Filling losses

P = 7.68

V<sub>v</sub> = Volume of vapor space (ft<sup>3</sup>) = 82,007

R = Ideal gas constant (10.731)

T = Average temperature of liquid and vapor below IFR (°R)

= Average temperature for Baltimore area from Tanks program = 55 °F (515°R)

M<sub>v</sub> = Vapor molecular weight = 60

S = Filling saturation factor (0.60 for a full liquid heel)

$$\begin{aligned} \text{LFL} &= \frac{7.68 \times 80,777}{10.731 \times 515} \times 60 \times 0.6 \\ &= 114 \times 36 \\ &= 4,104 \text{ pounds} \end{aligned}$$

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 3,720 \text{ lb} + 4,104 \text{ lb} \\ &= 7,824 \text{ pounds (3.91 tons)} \end{aligned}$$

Tank Vapor Space Volume (V<sub>v</sub>)

V<sub>v</sub> = Is the area formed between the floating roof and the liquid

Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 5 feet 4 inches

Product depth = 1 inch

h<sub>v</sub> = 5 feet 4 inches – 1 inch = 5 feet 3 inches = 5.25 ft

$$\begin{aligned} \text{V}_v &= \pi \times r^2 \times h_v = 3.14 \times 70^2 \times 5.25 \text{ ft} \\ &= 80,777 \text{ ft}^3 \end{aligned}$$

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 120-109**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 134 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$L_{TL} = L_{SL} + L_{FL}$$

$$L_{SL} = n_d K_E \left\{ \frac{P V_V}{R T} \right\} M_V K_S$$

$L_{SL}$  = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)  
 $n_d$  = 2  
 $K_E$  = Vapor Space Expansion Factor = 0.85

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V + \Delta P_V - \Delta P_B}{T_{LA} P_A - P_{VA}} = \frac{343.44 + 1.43 - 0.06}{521.07 \cdot 14.7 - 7.68} = 0.85$$

Where:

$\Delta T_V$  = Daily Vapor Temperature Range ( $^{\circ}R$ ) = 17.55  
 $\Delta P_V$  = Daily Vapor Pressure Range ( $^{\circ}R$ ) = 1.43  
 $\Delta P_B$  = Breather Vent Pressure Setting Range (psia) = 0.06  
 $P_A$  = Atmosphere Pressure (psia) = 14.7  
 $P_{VA}$  = Vapor Pressure at Daily Average Liquid Surface Temperature = 7.68  
 $T_{LA}$  = Daily Average Liquid Surface Temperature = 521.07

$P$  = 7.68 psia (from Tanks Report)  
 $V_V$  = Volume of vapor space (ft<sup>3</sup>) = 77,525  
 $R$  = Ideal gas constant (10.731)  
 $T$  = Average temperature of liquid and vapor below IFR ( $^{\circ}R$ )  
 = Average temperature for Baltimore area from Tanks program = 55  $^{\circ}F$  (515 $^{\circ}R$ )  
 $M_V$  = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60  
 $K_S$  = 0.31

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 120-109**

$\begin{aligned} \text{LSL} &= 2.0 \times 0.85 \frac{7.68 \times 76,397}{10.731 \times 515} \quad 60 \times 0.31 \\ &= 1.7 \times 106.2 \times 18.6 \\ \text{LSL} &= 3,357 \text{ lb} \end{aligned}$
--

$$\text{LFL} = \frac{\{P V_V\}}{\{R T\}} M_v S$$

- LFL = Filling losses
- P = 7.68 psia (from Tanks Report)
- V<sub>V</sub> = Volume of vapor space (ft<sup>3</sup>) = 76,397
- R = Ideal gas constant (10.731)
- T = Average temperature of liquid and vapor below IFR (°R)
- = Average temperature for Baltimore area from Tanks program = 55 °F (515°R)
- M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60
- S = Filling saturation factor (0.60 for a full liquid heel)

$\begin{aligned} \text{LFL} &= \frac{7.68 \times 76,397}{10.731 \times 515} \quad 60 \times 0.6 \\ &= 106.2 \times 36 \\ &= 3,823 \text{ pounds} \end{aligned}$
---

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 3,357 \text{ lb} + 3,823 \text{ lb} \\ &= 7,180 \text{ pounds (3.59 tons)} \end{aligned}$$

Tank Vapor Space Volume (V <sub>v</sub> )	
V <sub>v</sub>	= Is the area formed between the floating roof and the liquid
Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 5 feet 6 inches Product depth = 1 inch h <sub>v</sub> = 5 feet 6 inches – 1 inch = 5 feet 5 inches = 5.42 ft	
V <sub>v</sub>	= pi x r <sup>2</sup> x h <sub>v</sub> = 3.14 x 67 <sup>2</sup> x 5.42 ft
	= 76,397 ft <sup>3</sup>

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 24-110**

**Input Factors**

Tank Type: IFR with full liquid heel  
 Tank Diameter = 60 ft  
 Days on Legs: 2  
 Product Stored in Tank: Gasoline (RVP 15)  
 Product Filled into Tank: Gasoline (RVP 15)  
 Product height =

**Emission Calculations**

Using EPA AP-42, Chapter 7.1.3.2.2.2

$$L_{TL} = L_{SL} + L_{FL}$$

$$L_{SL} = n_d K_E \left\{ \frac{P V_V}{R T} \right\} M_v K_s$$

$L_{SL}$  = Standing loss during roof landing, lb (Note calculating as gasoline RVP 15)  
 $n_d$  = 2  
 $K_E$  = Vapor Space Expansion Factor = 0.85

Using equation (1-7) from EPA AP-42, Chapter 7.1.31

$$K_E = \frac{\Delta T_V + \Delta P_V - \Delta P_B}{T_{LA} P_A - P_{VA}} = \frac{343.44}{521.07} + \frac{1.43 - 0.06}{14.7 - 7.68} = 0.85$$

Where:

$\Delta T_V$  = Daily Vapor Temperature Range ( $^{\circ}R$ ) = 17.55  
 $\Delta P_V$  = Daily Vapor Pressure Range ( $^{\circ}R$ ) = 1.43  
 $\Delta P_B$  = Breather Vent Pressure Setting Range (psia) = 0.06  
 $P_A$  = Atmosphere Pressure (psia) = 14.7  
 $P_{VA}$  = Vapor Pressure at Daily Average Liquid Surface Temperature = 7.68  
 $T_{LA}$  = Daily Average Liquid Surface Temperature = 521.07

$P$  = 7.68 psia (from Tanks Report)  
 $V_V$  = Volume of vapor space (ft<sup>3</sup>) = 9,184  
 $R$  = Ideal gas constant (10.731)  
 $T$  = Average temperature of liquid and vapor below IFR ( $^{\circ}R$ )  
 = Average temperature for Baltimore area from Tanks program = 55  $^{\circ}F$  (515 $^{\circ}R$ )  
 $M_v$  = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60  
 $K_s$  = 0.43

**Emission Worksheet - Baltimore North**  
**Calculating Emissions from In-Service Roof Landing**  
**Tank ID # Tank 24-110**

$$\begin{aligned} \text{LSL} &= 2 \times 0.85 \times \frac{7.68 \times 9,184}{10.731 \times 515} \times 60 \times 0.43 \\ &= 1.7 \times 12.8 \times 25.8 \\ \text{LSL} &= 561 \end{aligned}$$

$$\text{LFL} = \frac{\{P V_V\}}{\{R T\}} M_v S$$

- LFL = Filling losses
- P = 7.68 psia (from Tanks Report)
- V<sub>V</sub> = Volume of vapor space (ft<sup>3</sup>) = 9,184
- R = Ideal gas constant (10.731)
- T = Average temperature of liquid and vapor below IFR (°R)  
 = Average temperature for Baltimore area from Tanks program = 55 °F (515°R)
- M<sub>v</sub> = Vapor molecular weight of gasoline RVP 15 (from Tanks Report) = 60
- S = Filling saturation factor (0.60 for a full liquid heel)

$$\begin{aligned} \text{LFL} &= \frac{7.68 \times 9,184}{10.731 \times 515} \times 60 \times 0.6 \\ &= 12.8 \times 36 \\ &= 461 \text{ pounds} \end{aligned}$$

$$\begin{aligned} \text{LTL} &= \text{LSL} + \text{LFL} \\ &= 561 \text{ lb} + 461 \text{ lb} \\ &= 1,022 \text{ pounds (0.511 tons)} \end{aligned}$$

Tank Vapor Space Volume (V<sub>v</sub>)

V<sub>v</sub> = Is the area formed between the floating roof and the liquid

Input factors: Distance from the bottom of the roof to the tank floor when roof is landed on leg supports = 3 feet 4 inches  
 Product depth = 1 inch  
 h<sub>v</sub> = 3 feet 4 inches – 1 inch = 3 feet 3 inches = 3.25 ft

$$\begin{aligned} \text{V}_v &= \pi \times r^2 \times h_v = 3.14 \times 30^2 \times 3.25 \text{ ft} \\ &= 9,184 \text{ ft}^3 \end{aligned}$$

# Emission Worksheet - Truck Rack

## Petroleum Fuel & Terminal Company – Baltimore, MD

### Baltimore North

Fugitive VOC Emissions from Truck Rack:

$$\begin{aligned} \text{VOC (ton/yr)} &= 519,253,584 \text{ gal/yr} \times 0.00015 \text{ lb/gal} \times 1 \text{ ton}/2,000 \text{ lb} \\ &= \mathbf{38.9 \text{ tons/yr}} \end{aligned}$$

$$\begin{aligned} \text{Total VOC Emissions From Gasoline Load-Out Operation} &= 21.7 \text{ tons/yr} + 38.9 \text{ tons/ yr} \\ &= \mathbf{60.6 \text{ tons/yr}} \end{aligned}$$

#### Distillate Fuel

The truck rack is setup to direct all vapors to the control device. For distillate fuel load-out, the permit emission limit of 10 mg/l (0.000083454 lb/gal) is being used to calculate VOC emissions from the control device. Note that fugitive emissions from the truck rack during loading of distillate fuel are assumed to be negligible and are not included.

Potential throughput is being based on the potential throughput of the four fixed roof storage tanks. Tank throughput is being based 24 tank turnovers/year. The throughput values from the Tank Reports are used to calculate VOC emissions.

$$\text{Potential Throughput (gal/yr)} = 273,461,593 \text{ gal/yr}$$

$$\begin{aligned} \text{VOC Emissions from} \\ \text{distillate fuel load-out (ton/yr)} &= 273,461,593 \text{ gal/yr} \times 0.000083454 \text{ lb/gal} \times 1 \text{ ton}/2,000 \text{ lb} \\ &= \mathbf{11.4 \text{ tons/yr}} \end{aligned}$$

#### HAP Emissions

Hazardous air pollutant (HAP) emissions from gasoline are included. The HAP emission potential from fuel ethanol and distillate fuels is considered as de minimus (COMAR 26.11.02.10). HAP information from EPA document # EPA-453/R-94-002a, January 1994, Gasoline Distribution Industry (Stage 1) - Background Information for Proposed Standards, Appendix C, Calculation of HAP Vapor Profiles for Gasoline. Using weight by percentage for “normal gasoline” as listed in Table C-5

#### Gasoline

<b>HAP Emissions</b>				
HAP Constituent	CAS Number	Percentage by Weight in Normal Gasoline Vapors	Calculation	HAP Emissions (tons/yr)
Benzene	8006-61-9	0.9	0.009 x 60.6 tons/yr	0.55
Ethylbenzene	100-41-4	0.1	0.001 x 60.6 tons/yr	0.06
n-Hexane	110-54-3	1.6	0.016 x 60.6 tons/yr	0.97
Toluene	108-88-3	1.3	0.013 x 60.6 tons/yr	0.79
2,2,4-Trimethylpentane	540-84-1	0.8	0.008 x 60.6 tons/yr	0.49
Xylenes	095-47-6	0.5	0.005 x 60.6 tons/yr	0.30
<b>Total HAPS</b>		<b>5.2</b>		<b>3.16</b>

# Emission Worksheet - Truck Rack

## Petroleum Fuel & Terminal Company – Baltimore, MD

### Baltimore North

The truck rack is equipped with a John Zink carbon adsorption/absorption vapor recovery unit (VRU). The truck rack has the potential to load-out gasoline (all types), fuel ethanol (combined with gasoline), and distillate fuels. Vapors from all load-out operations are directed to the VRU.

#### Gasoline/Ethanol

VOC emissions from gasoline/ethanol loading include the VRU plus fugitive emissions from the truck rack.

Potential throughput is being based on the potential throughput of the six internal floating roof storage tanks. Tank throughput is being based 24 tank turnovers/year. The throughput values from the Tank Reports are used to calculate VOC emissions.

Potential Throughput (gal/yr) = 519,253,584 gal/yr

#### **VRU**

To calculate loading losses from the loading of gasoline during the operation of the VRU, the emission rate of 10 mg/l will be used. Test results performed on 6/1/17 list a VOC emission rate of 1.70 mg/l of gasoline loaded.

Emission Rate: 10 mg/l (0.000083454 lb/gal)

VOC Emissions from VCU (ton/yr) = 519,253,584 gal/yr x 0.000083454 lb/gal x 1 ton/2,000 lb  
= **21.7 tons/yr**

#### **Fugitive Emissions from Truck Rack:**

Fugitive Emissions = Uncontrolled VOC Emissions x (1-Capture Efficiency)

Uncontrolled VOC Emissions = Product Throughput/10<sup>3</sup> gal x 12.46(SPM/T)

For gasoline (RVP 15):

S = 1.0 (From AP-42, Table 5.2-1 for truck loading with dedicated vapor balance service)

P = 7.68 psi (From Tanks Report for gasoline RVP 15)

M = 60 lb/lb-mole (From Tanks Report for gasoline RVP 15)

T = (°R = °F + 460) = °F = 55.11°F (from Tanks Report) So, 55.11 + 460 = 515.11°R

Uncontrolled VOC Emissions = 10<sup>3</sup> gal/yr x 12.46 (1.0 x 7.68 x 60 / 515.11)  
= 11.15 lb/10<sup>3</sup> gal

Capture Efficiency of collection system = 98.7% from AP-42, Chapter 5.2

Fugitive Emission Rate = Uncontrolled VOC Emissions x (1-Capture Efficiency)  
= (11.70 lb/10<sup>3</sup> gal x (1-0.987))/1,000  
= 0.00016 lb/gal

# Emission Worksheet

## Fugitive VOC Emissions

### Petroleum Fuel & Terminal Company – Baltimore North

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Fugitive VOC emissions from potential equipment leaks are being estimated following API Publication # 4588 (Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing). Fugitive emissions for the following equipment components are being provided: loading arms, meters, pump seals, and valves.

#### Fugitive VOC Emissions

Fugitive VOC Emissions = Number of Components x Emission Factor x Operating Hours

Fugitive VOC Emissions (Loading Arms) =  $20 \times 0.00087 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb}$   
= 0.076 ton/yr

Fugitive VOC Emissions (Meters) =  $15 \times 0.00025 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb}$   
= 0.017 ton/yr

Fugitive VOC Emissions (Pump Seals) =  $15 \times 0.00093 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb}$   
= 0.061 ton/yr

Fugitive VOC Emissions (Valves) =  $86 \times 0.00015 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000$   
= 0.057 ton/yr

**Total Fugitive VOC Emissions = 0.211 tons/yr**