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Title V Renewal Application

Marathon Petroleum Company
Kenova Terminal
Kenova, West Virginia

January 2010

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Introduction

Marathon Petroleum Company (MPC), operates a bulk petroleum products storage terminal in Kenova, West Virginia. This terminal currently operates under West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality (DAQ) Permit No. R30-099001-2005, which expires on August 5, 2010. This document serves as the operating permit renewal application for this facility and contains the supporting documentation.

Site Description

The Kenova Terminal is located at 23rd Street and River, Kenova, WV 25530, in Wayne County. The Finished Product Loading Dock is located at Ohio River Mile Marker 316.3 on the Left Descending Bank and the Loaded Fleet Dock is located at Ohio River mile Marker 315.9 on the Left Descending Bank. The Kenova Terminal is wholly owned and operated by Marathon Petroleum Company (MPC).

The Kenova Terminal transfers a full range of petroleum products. The Kenova Terminal receives refined petroleum products, primarily gasoline and fuel oil, for MPC's Catlettsburg, KY refinery via pipeline. Product can be loaded directly from the refinery or from either the Kenova Terminal tank farm or the Tri-State, WV tank farm to the Finished Product Loading Dock. Off-loading of barges also occurs occasionally. Towboats are also fueled at this facility at the Loaded Fleet Dock. However, neither trucks nor railcars are loaded or unloaded at this facility. In 2003, the Kenova Terminal became the source for product to the Cardinal Pipeline (wholly owned and operated by Marathon Pipeline Company (MPL). The Cardinal Pipeline is a 16" pipeline connecting the Kenova terminal with the Columbus, Ohio Terminal.

The Kenova Terminal has thirteen (13) Aboveground Storage Tanks. The maximum working capacity of the largest storage tank is 6,288,746 gallons (Tank 150-262). The maximum working capacity for the Kenova Terminal is 29,849,465 gallons. The North American Industry Classification System (NAICS) Code for this facility is 424710 and the Standard Industrial Classification (SIC) code is 4491.

Title V Application Renewal Forms

The completed Title V Application renewal forms are provided in Appendix A. The maps and figures supporting this application are provided in Appendix C.

Emission Calculations

Emission calculations for the aboveground storage tanks (257, 258, 259, 260, 261, 270, 271, and 272) were performed by using the TANKS Emissions Estimation Software, Version 4.09 which is supported by the United States Environmental Protection Agency (USEPA). TANKS is based on the emission estimation procedures from Chapter 7 of USEPA's *Compilation Of Air Pollutant Emission Factors* (AP-42).

Actual emissions from the gasoline barge loading operation are based on the stack test performed by Jordan Technologies, Inc. on May 7, 2009. TANKS 4.09 software was used to estimate the potential emissions.

The actual diesel barge loading operations calculations are based on the emission factors in AP-42 Section 5.2 Transportation and Marketing of Petroleum Liquids, Table 5.2-6 and TANKS 4.09 was used to calculate the potential emissions.

The fugitive emissions from the facility were performed using emission factors obtained from May 1993 ATMYS, “Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing Terminal”, Table 5-10 (Petroleum Marketing Terminal Average THC Emission Factors in pounds per hour per component), Volume 1: Text, Publication Number 4588.

The detailed emission calculations are provided in Appendix B.

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Appendix A

Permit Application Forms

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.wvdep.org/daq

TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **As registered with the WV Secretary of State's Office):** Marathon Petroleum Company, LLC	**2. Facility Name or Location:** Kenova Marine Terminal
3. DAQ Plant ID No.: 099 — 00100	**4. Federal Employer ID No. (FEIN):** 31-1537655

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 01/01/1951
☒ Permit Renewal — What is the expiration date of the existing permit? 08/05/2010
☐ Update to Initial Permit Application

6. Type of Business Entity:

☐ Corporation ☐ Governmental Agency
☐ Partnership ☒ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

_____
_____
_____

8. Number of onsite employees:

55

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: P.O. Box 83		
City: Kenova	**State:** WV	**Zip: 25530**
Telephone Number: (606) 921-3137	**Fax Number:** (304) 453-1080	

12. Facility Location		
Street: 23rd & River Streets	**City:** Kenova	**County:** Wayne
UTM Easting: 361.323 km	**UTM Northing:** 4251.68 km	**Zone:** ☒ 17 or ☐ 18
Directions: From Charleston, travel I-64 to the Ceredo/Kenova exit. Take Highway 75 North to Route 60 West. Turn right onto 21st Street, then left on Beech Street. Storage tank farm on left, second black top road to the right and through flood wall is the office and barge loading.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** Kentucky Ohio
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No		**If yes, name the area(s).**
[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*		

13. Contact Information		
Responsible Official: Bradley R. McKain		**Title:** Terminal Manager
Street or P.O. Box: 539 South Main Street		
City: Findlay	**State:** OH	**Zip: 45840**
Telephone Number: (419) 421-2121	**Fax Number:** (419) 421-4216	
E-mail address: brmckain@marathonoil.com		
Environmental Contact: Steve Chalupa		**Title:** Environmental Professional
Street or P.O. Box: 100 12th Street		
City: Catlettsburg	**State:** KY	**41129**
Telephone Number: (606) 734-2482	**Fax Number:** (606) 739-9890	
E-mail address: scchalupa@marathonoil.com		
Application Preparer: Steve Chalupa		**Title:** Environmental Professional
Company: Marathon Petroleum Company, LLC		
Street or P.O. Box: 100 12th Street		
City: Catlettsburg	**State:** KY	**Zip: 41129**
Telephone Number: (606) 734-2482	**Fax Number:** (606) 739-9890	
E-mail address: scchalupa@marathonoil.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Tanks	Petroleum Products		4491
Barge Loading	Petroleum Products		4491

Provide a general description of operations.

Receive, store, and ship petroleum products.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.- **see Appendix C of the permit** application

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines." – **see Appendix C of the permit application**

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships. – **Previously provided and no changes have occurred in the process flow diagram.**

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☐ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

45CSR21, Section 22 - Not applicable because Kenova WV Terminal does not have gasoline truck loading facilities.
40 CFR 60, Subpart XX - Not subject because this facility does not have gasoline tank truck loading facilities.
40 CFR 63, Subpart ZZZZ - Marathon Petroleum Company does not operate any internal combustion engines subject to this MACT.
40 CFR 63, Subpart EEEE - No affected sources subject to the OLD MACT. Specifically, storage tanks that are subject to the Gasoline Distribution MACT are excluded from the OLD MACT. Other tanks are exempt due to true vapor pressure.
40 C.F.R. Part 82, Subpart F - The permittee has stated that it does no maintenance, service, repair, or disposal of appliances at the facility.

☒ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

45CSR6: Open burning prohibited.

45CSR11: Standby plans for emergency episodes.

45CSR13: Preconstruction permit.

45CSR21: Internal/external floating roof storage tank requirements.

WV Code 22-5-4(a)(14): The Secretary may request any pertinent information such as annual emission inventory reporting.

45CSR30: Operating permit requirement.

40 CFR 60, Subpart Kb: Requirements for volatile organic liquid storage vessels.

40 CFR 61: Asbestos inspection and removal

40 CFR 63, Subpart R: Gasoline Distribution Facility requirements.

40 CFR 63, Subpart Y: Marine Tank Vessel Loading Operations requirements.

40 CFR 82, Subpart F: Ozone Depleting substances.

45CSR4: No objectionable odor

☒ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring: Perform monthly leak inspections of all equipment in gasoline service. Equipment shall be inspected during the loading of a gasoline cargo tank.

Testing: Stack testing per accepted protocols.

Recordkeeping:

Shall keep records of monitoring information to include date and time of sampling or measurements, date of analysis, company performed analyses, analytical techniques, results, and operating conditions.

Shall maintain a record of all odor complaints with an assessment of the validity of complaint and corrective actions taken.

Log book shall be signed by owner or operator at the completion of each inspection to include description or diagram of all equipment in gasoline service at the facility.

Permittee shall record in logbook for each leak detected: equipment type and ID number; nature of leak and method detected; date the leak was detected and the date of each attempt to repair; repair methods; "Repair delayed" and the reason for the delay if leak is not repaired within 15 calendar days after discovery of leak; the expected date of successful repair of leak if not repaired within 15 days, and the date of successful repair.

Reporting:

All reports submitted to the agency shall contain certification by responsible official states that, "based on

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

☒ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

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

Submit a certified emissions statement and pay fees on an annual basis.

Submit annual compliance certification to the DAQ by March 15 of every year that certifies compliance with permit conditions.

Submit semi-annual monitoring reports by March 15 and September 15.

Report by phone or fax within 1 day of an emergency or upset condition. A written report must be submitted within 10 days that includes the probable cause and corrective actions.

Report any deviation that poses an imminent and substantial danger to public health, safety, or environment to the Secretary by phone or fax. A written report must be submitted with probable cause and corrective actions or preventative actions taken within 10 days.

Submit to the Director and the USEPA a description of the types, identification numbers, and locations of all equipment in gasoline service.

Submit a semi-annual report to the Director and USEPA, the number of equipment leaks not repaired within 5 days of detection.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-2277A	06/01/2004	
CO-BGT-R21-94-11	07/15/1994	
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	0
Nitrogen Oxides (NO_X)	0
Lead (Pb)	0
Particulate Matter ($PM_{2.5}$)[1]	0
Particulate Matter (PM_{10})[1]	0
Total Particulate Matter (TSP)	0
Sulfur Dioxide (SO_2)	0
Volatile Organic Compounds (VOC)	225.47
Hazardous Air Pollutants[2]	Potential Emissions
Benzene	3.708
Ethylbenzene	2.889
Hexane (-n)	2.060
Isopropyl Benzene (Cumene)	1.029
Toluene	14.458
2,2,4 Trimethylpentane (Iso-octane)	1.646
Xylene	14.542
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☐	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☐	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☐	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☐	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☐	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☐	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26.	Fire suppression systems.
☐	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☐	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)		
		owners/operators must still get a permit if otherwise requested.)
☐	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☐	43.	Process water filtration systems and demineralizers.
☐	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☐	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☐	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☒	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**. – **See Appendix A of the permit application.**
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**. - **See Appendix A of the permit application.**
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**. - **See Appendix A of the permit application.**
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Bradley R. McKain	Title: TT&M Manager

Responsible official's signature:

Signature: _____ Signature Date: _____

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

☒	ATTACHMENT A: Area Map – See Appendix C of the permit application
☒	ATTACHMENT B: Plot Plan(s) – See Appendix C of the permit application
☒	ATTACHMENT C: Process Flow Diagram(s) – See Appendix C of the permit application
☒	ATTACHMENT D: Equipment Table– See Appendix A of the permit application
☒	ATTACHMENT E: Emission Unit Form(s) – See Appendix A of the permit application
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s) – See Appendix A of the permit application
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.wvdep.org/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT D - Emission Units Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Tank 257	Tank 257	Internal Floating Roof Gasoline Storage Tank	1951/1995	3,803,478 gallons	N/A
Tank 258	Tank 258	Internal Floating Roof Gasoline Storage Tank	1951/1997	3,546,889 gallons	N/A
Tank 259	Tank 259	External Floating Roof Gasoline Storage Tank with Mechanical Show Primary Seal and Flexible Wiper Secondary Seal	1951 994	3,731,517 gallons	N/A
Tank 260	Tank 260	External Floating Roof Gasoline Storage Tank with Mechanical Show Primary Seal and Flexible Wiper Secondary Seal	1968/1993	4,090,341 gallons	N/A
Tank 261	Tank 261	Fixed Cone Roof #2 Fuel Oil Storage Tank	1968/1992	6,223,602 gallons	N/A
Tank 262	Tank 262	Fixed Cone Roof #2 Fuel Oil Storage Tank	1971	6,288,746 gallons	N/A
Tank 270	Tank 270	Internal Floating Roof Gasoline/#2 Fuel Oil/Kerosene Storage Tank	2001	1,956,497 gallons	N/A
Tank 271	Tank 271	Internal Floating Roof Gasoline/#2 Fuel Oil/Kerosene Storage Tank	2001	1,952,628 gallons	N/A
Tank 272	Tank 272	Internal Floating Roof Gasoline/#2 Fuel Oil/Kerosene Storage Tank	2001	2,065,596 gallons	N/A
Barge Loading Stations 1 - 7	Barge Loading Stations 1 - 7	Marine Vessel loading Operations (gasoline, kerosene, and #2 fuel oil)	N/A	Gasoline: 338,903,000 gallons Kerosene: 196,796,000 gallons #2 Fuel Oil: 621,932,000 gallons	VRU

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 257	Tank 257	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Internal Floating Roof Gasoline Storage Tank with Mechanical Shoe Primary Seal and Flexible Wiper Secondary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1951	01/01/1951	06/26/2008

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 3,803,478 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data

Criteria Pollutants	Potential Emissions

	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		5.35
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.096
Ethylbenzene		0.075
Hexane (-n)		0.054
Isopropyl Benzene (Cumene)		0.027
Toluene		0.375
2,2,4 Trimethylpentane (Iso-octane)		0.043
Xylene		0.375
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 3,803,478 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 258	Tank 258	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Internal Floating Roof Gasoline Storage Tank with Mechanical Shoe Primary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1951	01/01/1951	01/01/1997

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 3,546,889 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Page _____ of _____

Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		6.25
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.113
Ethylbenzene		0.088
Hexane (-n)		0.063
Isopropyl Benzene (Cumene)		0.031
Toluene		0.438
2,2,4 Trimethylpentane (Iso-octane)		0.050
Xylene		0.438
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 3,546,889 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 259	Tank 259	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
External Floating Roof Gasoline Storage Tank with Mechanical Show Primary Seal and Flexible Wiper Secondary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1951	01/01/1951	10/18/2007

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 3,731,517 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions

	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		4.52
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.081
Ethylbenzene		0.063
Hexane (-n)		0.045
Isopropyl Benzene (Cumene)		0.023
Toluene		0.317
2,2,4 Trimethylpentane (Iso-octane)		0.036
Xylene		0.317
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 3,731,517 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 260	Tank 260	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
External Floating Roof Gasoline Storage Tank with Mechanical Shoe Primary Seal and Flexible Wiper Secondary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1968	01/01/1968	01/15/2004

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 4,090,341 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions

	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		4.74
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.085
Ethylbenzene		0.066
Hexane (-n)		0.047
Isopropyl Benzene (Cumene)		0.024
Toluene		0.332
2,2,4 Trimethylpentane (Iso-octane)		0.038
Xylene		0.332
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 4,090,341 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 261	Tank 261	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fixed Cone Roof #2 Fuel Oil Storage Tank

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1968	01/01/1968	10/04/2003

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 6,223,602 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Page _____ of _____

Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		3.45
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.0007
Ethylbenzene		0.0014
Hexane (-n)		0.0003
Toluene		0.0090
Xylene		0.0238
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 6,223,602 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** N/A
Tank 262	Tank 262	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fixed Cone Roof #2 Fuel Oil Storage Tank

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1971	01/01/1971	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 6,288,746 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
114,155 gallons	1,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Page _____ of _____

Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		3.60
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.0007
Ethylbenzene		0.0014
Hexane (-n)		0.0004
Toluene		0.0094
Xylene		0.0249
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 6,288,746 gallons and annual usage of 1,000,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
Tank 270	Tank 270	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Internal Floating Roof, Gasoline/#2 Fuel Oil/Kerosene Storage Tank with Mechanical Shoe Primary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/2001	01/01/2001	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1,956,497 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
285,388 gallons	2,500,000,000 gallons	8760 hours

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data

Criteria Pollutants	Potential Emissions

	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		5.65
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.102
Ethylbenzene		0.079
Hexane (-n)		0.057
Isopropyl Benzene (Cumene)		0.028
Toluene		0.395
2,2,4 Trimethylpentane (Iso-octane)		0.045
Xylene		0.395
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 1,956,497 gallons and annual usage of 2,500,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
Tank 271	Tank 271	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Internal Floating Roof, Gasoline/#2 Fuel Oil/Kerosene Storage Tank with Mechanical Shoe Primary Seal
Seals: Primary shoe

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/2001	01/01/2001	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1,952,628 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
285,388 gallons	2,500,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		5.65
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.102
Ethylbenzene		0.079
Hexane (-n)		0.057
Isopropyl Benzene (Cumene)		0.028
Toluene		0.396
2,2,4 Trimethylpentane (Iso-octane)		0.045
Xylene		0.396
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 1,952,628 gallons and annual usage of 2,500,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
Tank 272	Tank 272	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Internal Floating Roof Gasoline/#2 Fuel Oil/Kerosene Storage Tank with Mechanical Shoe Primary Seal

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
01/01/2001	01/01/2001	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,065,596 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
285,388 gallons	2,500,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		5.73
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.103
Ethylbenzene		0.08
Hexane (-n)		0.057
Isopropyl Benzene (Cumene)		0.029
Toluene		0.401
2,2,4 Trimethylpentane (Iso-octane)		0.046
Xylene		0.401
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS 4.09D

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR21- Regulation to Prevent and Control Air Pollution From the Emission of VOCs
45CSR21, Section 28 – Petroleum Liquid Storage in Fixed Roof Tank
45CSR16 – Standards of Performance for New Stationary Sources
40 CFR 60, Subpart Kb – subject to NSPS for VOC liquid storage vessels modified after 7/23/84
40 CFR 63, Subpart R – store gasoline and subject to storage tank requirements of MACT
40 CFR 60.112b – Standard for VOCs in tanks

Calculations based on tank capacity of 2,065,596 gallons and annual usage of 2,500,000,000 gallons.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Inspections: Conduct routine, semi-annual inspections of roof and seals.

Recordkeeping:
Have records available that includes types of petroleum liquids stored, maximum true vapor pressure, and inspections.
Maintain daily, monthly, and annual records of throughputs of the tank.
Records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
Maintain a record of the volatile organic liquid stored, period of storage, maximum true vapor pressure during the storage period.

Reporting:
Submit report when an excess emissions occurrence is expected to last more than 7 days.
Submit a report within 30 days prior to refilling the tank if that vessel was in need of repair.
Submit a report within 30 days of when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Diesel Barge Loading	Diesel Barge Loading	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Diesel Barge Loading

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	Marathon field constructed
Construction date:	**Installation date:**	**Modification date(s):**
N/A	N/A	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,000,000,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
228,310 gallons	2,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Page _____ of _____

Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		12.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		0.003
Ethylbenzene		0.005
Hexane (-n)		0.001
Toluene		0.33
Xylene		0.087
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 Section 5.2 Transportation and Marketing of Petroleum Liquids (6/2008) – Table 5.2-6 and TANKS 4.09 was used for potential emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

40 CFR 63, Subpart Y – Marine Barge Loading Operation is subject to this MACT.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Vapor collection - measure and record the vent stream flow rate of each by-pass line every 15 minutes by the installation of a monitoring system.
Carbon absorber – monitor VOC concentrations at exhaust point and record output.

Recordkeeping:
Keep vapor-tightness documentation.
Maintain records of all measurement, calculations, and other documentation.
Maintain records of emission estimation calculations.
Submit an annual report of the source's HAP control efficiency.
Maintain emission calculations and actual throughput.
When leak detection equipment is repaired, maintain date of inspection, findings, leak determination method, corrective action, and inspector's name and signature.

Reporting:
Submit report when an excess emissions and parameter monitoring exceedances within 30 days of the calendar year or six month period.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Gasoline Barge Loading	Gasoline Barge Loading	VRU

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Gasoline Barge Loading

Manufacturer:	**Model number:**	**Serial number:**
Marathon field constructed	Marathon field constructed	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	N/A	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 4,000,000,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
456,621 gallons	4,000,000,000 gallons	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Page _____ of _____

Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		166.91
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		3
Ethylbenzene		2.34
Hexane (-n)		1.67
Isopropyl Benzene (Cumene)		0.83
Toluene		11.68
2,2,4 Trimethylpentane (Iso-octane)		1.34
Xylene		11.68
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Stack test was conducted on May 7, 2009 and TANKS 4.09 was used for potential emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

40 CFR 63, Subpart Y – Marine Barge Loading Operation is subject to this MACT.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Vapor collection - measure and record the vent stream flow rate of each by-pass line every 15 minutes by the installation of a monitoring system.
Carbon absorber – monitor VOC concentrations at exhaust point and record output.

Testing – Annual stack testing

Recordkeeping:
Keep vapor-tightness documentation.
Maintain records of all measurement, calculations, and other documentation.
Maintain records of emission estimation calculations.
Submit an annual report of the source's HAP control efficiency.
Maintain emission calculations and actual throughput.
When leak detection equipment is repaired, maintain date of inspection, findings, leak determination method, corrective action, and inspector's name and signature.

Reporting:
Submit report when an excess emissions and parameter monitoring exceedances within 30 days of the calendar year or six month period.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Page _____ of _____

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0001	**List all emission units associated with this control device.** Barge Loading	
Manufacturer: John Zink	**Model number:** HAM54001650101085B	**Installation date:** 03/01/1999

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

_X_ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Volatile Organic Compounds	99.99%	97+%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Pressure Drop: minimum = 2.0 inches H2O, average = 5.0 inches H2O, and maximum = 14.0 inches H2O
Inlet Gas Flow: average = 750 ft3/min and maximum = 1520 ft3/min
Inlet Gas Temperatures: average = 80 deg. F and maximum = 180 deg. F
Outlet Gas Flow: 750 ft3/min and maximum = 1520 ft3/min
Outlet Gas Temperatures: average = 100 deg. F and maximum = 180 deg. F

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.
A stack test was conducted on May 7, 2009. The Gasoline Terminal Air Emission Source Test was conducted in accordance with procedures established and the test methods referenced in 40 CFR 63, Subpart Y which specifically included: Method 2, Method 2A, Method 25B, Method 21, and 40 CFR 63.565(b)(3).

ARCADIS

Appendix B

Emission Calculations

Permit Renewal - Terminal Summary

Terminal: Marathon Ashland Petroleum, Kenova, WV

Date: Potential

Barge Throughput (in Gallons)	
from Terminal	**Actual**
Gasoline-Conventional	4,000,000,000
No. 2 Fuel Oil	2,000,000,000
No. 1 Fuel Oil (Kerosene)	1,000,000,000

Hazardous Air Pollutants (HAPS) Actuals TPY (sheet totals)	
Normal Gasoline/Diesel	40.3325
TOTAL HAPS:	**40.3325**

Other Emissions (tons/yr)		
	NOX	**CO**
Flare	0.00	0.00

VOC Emissions	-- ESTIMATED -- (Tons/Year)				
	Gas	**Fuel Oils**			**Totals**
From Tanks 4.0 Program:	37.90	7.06			
Subtotal-Tanks	37.90	7.06			44.95
Loading: w/ VCS:	166.91	0.61			
Loading: w/ no Controls:		12.00			
Subtotal-Barge Loading	166.91	12.61			179.51
Terminal Fugitives:	1.00				
Subtotal-Fugitives	1.00				1.00
VOC Totals Per Terminal:	**205.80**	**19.67**	**0.00**	**0.00**	**225.47**

Permit Renewal - Tank Thruputs

Terminal: Marathon Ashland Petroleum, Kenova, WV
Period: Potential

Tank ID	Product Stored	TANK DATA			Estimated Annual Tank Thruput (Gallons)	Estimated Turn-Overs (Per Year)	Emissions Using TANKS 4.09	
		Type Roof	*"Working" Capacity From TANKS (1/7/10)*				Total (Lbs.)	Total (Tons)
			(Barrels)	(Gallons)				
257	Gasoline	IFR	90,559	3,803,478	1,000,000,000	262.9	10,700.84	5.350
258	Gasoline	IFR	84,450	3,546,889	1,000,000,000	281.9	12,502.94	6.251
259	Gasoline	IFR	88,846	3,731,517	1,000,000,000	268.0	9,049.01	4.525
260	Gasoline	IFR	97,389	4,090,341	1,000,000,000	244.5	9,479.63	4.740
261	Distillate	VFR	148,181	6,223,602	1,000,000,000	175.0	6,906.06	3.453
262	Distillate	VFR	149,732	6,288,746	1,000,000,000	159.0	7,209.02	3.605
270	Gasoline	IFR	46,583	1,956,497	2,500,000,000	1277.8	11,297.74	5.649
271	Gasoline	IFR	46,491	1,952,628	2,500,000,000	1280.3	11,304.95	5.652
272	Gasoline	IFR	49,181	2,065,596	2,500,000,000	1210.3	11,458.20	5.729
							89,908.39	44.95

Fugitive VOC Emissions Estimate
Ashland Petroleum Company
Kenova, WV Storage and Distribution Facility

Revised: January 26, 2010

	NUMBER	FACTOR	LBS/HR	HRS/YR	LBS/YR	TONS/YR
Valves (liquid service)	905	0.000150	0.135750	8760	1,189.17	0.595
Valves (vapor service)	238	0.000160	0.038080	8760	333.58	0.167
Flanges	485	0.000023	0.011155	8760	97.72	0.049
Pump Seals	11	0.000930	0.010230	8760	89.61	0.045
Pressure Relief Valves	24	0.00140	0.033600	8760	294.34	0.147
				Totals:	**2,004.42**	**1.00**

NOTE:
Emission factors obtained from May 1993 ATMYS, "Development of Fugitive Emission Factors and Emission Profiles for Peroleum Marketing Terminals", Table 5-10 (Petroleum Marketing Terminal Average THC Emission Factors in lbs/hr/component), Volume 1: Text, Publication Number 4588.

Emissions - Barge Loading

Marathon Petroleum Company LLC

TERMINAL LOCATION: Kenova, WV

DATE: 1/8/2010

MATERIAL LOADED: Gasoline and Fuel Oil

BY: Stephen C. Chalupa

COMMENTS: Potential to emit "with controls" and "without controls"

GASOLINE LOADING -- BASED ON VRU STACK TEST RESULTS

Emission Estimate (EE) = L x Thruput *{lb of VOC emission}*

5/5/2009	Most Recent Test Date
10	mg/L Gasoline Loaded

L	0.083	lb/1000 gallon loaded		
Thruput	4,000,000	1000 gallon	4,000,000,000	Actual Thruput

ESTIMATED	**333,811.71**	**lbs. VOC**
EMISSIONS	**166.91**	**tons VOC**

FUEL OIL LOADING -- BASED ON AP-42 (SECTION 5.2 TRANSPORTATION AND MARKETING OF PETROLEUM LIQUIDS 6/2008)

Loading Petroleum Liquid - Estimated Emissions (EE)

$$L = \frac{12.46\ SPM\ (1 - \%eff/100)}{T}$$

EE = L x Thruput *{lb. of VOC emission}*

WHERE

S	1	Saturation Factor		
P	0.0065	True Vapor Pressure of Liquid Loading, psia		
		Temp º F:	60	
M	130	Molecular Weight of Vapors, lb/lb - mole		
T	519.67	Temperature of Bulk Liquid Loaded, (ºR)		
%eff	97.00	VRU Control Efficiency		
L	0.001	lb/1000 gal loaded		
Thruput	2,000,000	1000 gal, Actual.	2,000,000,000	Thruput in gallons

ESTIMATED	**1,215.62**	**lbs. VOC**
EMISSIONS	**0.61**	**tons VOC**

Marathon Ashland Petroleum, Kenova, WV

Toxic Air Emissions

Potential	270		271		272		TOTAL	
	lbs	tons	lbs	tons	lbs	tons	lbs	tons
TOTAL VOC'S EMISSIONS (lbs)	11,297.74		11,304.95		11,458.20		34,060.89	
AIR TOXIC	**AVG. GASOLINE**		**AVG. GASOLINE**		**AVG. GASOLINE**		**AVG. GASOLINE**	
Anthracene	ND	ND	ND	ND	ND	ND	0.00	0.00
1,2,3-Trimethylbenzene	2.15	0.00	2.15	0.00	2.18	0.00	6.47	0.00
1,2,4-Trimethylbenzene	15.18	0.01	15.19	0.01	15.39	0.01	45.77	0.02
1,3,5-Trimethylbenzene	5.57	0.00	5.57	0.00	5.65	0.00	16.80	0.01
1,3 Butadiene	22.26	0.01	22.27	0.01	22.57	0.01	67.12	0.03
Benzene	119.49	0.06	119.57	0.06	121.19	0.06	360.37	0.18
Benzo (A) Anthracene	ND	ND	ND	ND	ND	ND	0.00	0.00
Benzo (A) Pyrene	ND	ND	ND	ND	ND	ND	0.00	0.00
Biphenyl	ND	ND	ND	ND	ND	ND	0.00	0.00
n-Butyl alcohol	ND	ND	ND	ND	ND	ND	0.00	0.00
sec-Butyl alcohol	ND	ND	ND	ND	ND	ND	0.00	0.00
tert-Butyl alcohol	ND	ND	ND	ND	ND	ND	0.00	0.00
Cumene	2.37	0.00	2.37	0.00	2.41	0.00	7.16	0.00
Cyclohexene	10.02	0.01	10.02	0.01	10.16	0.01	30.21	0.02
Cyclohexane	15.21	0.01	15.22	0.01	15.43	0.01	45.88	0.02
Cyclopentane	34.35	0.02	34.37	0.02	34.83	0.02	103.58	0.05
Divinyl benzene	ND	ND	ND	ND	ND	ND	0.00	0.00
Ethyl benzene	26.55	0.01	26.57	0.01	26.93	0.01	80.07	0.04
Ethylene	1.36	0.00	1.36	0.00	1.37	0.00	4.09	0.00
Methylcyclohexane	16.72	0.01	16.73	0.01	16.96	0.01	50.43	0.03
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	0.00	0.00
Methyl ethyl ketone	ND	ND	ND	ND	ND	ND	0.00	0.00
Methanol	ND	ND	ND	ND	ND	ND	0.00	0.00
n-Hexane	146.49	0.07	146.59	0.07	148.58	0.07	441.80	0.22
Naphthalene	ND	ND	ND	ND	ND	ND	0.00	0.00
Nonane	6.67	0.00	6.67	0.00	6.76	0.00	20.10	0.01
Phenol	ND	ND	ND	ND	ND	ND	0.00	0.00
Propylene	0.49	0.00	0.49	0.00	0.50	0.00	1.48	0.00
Styrene, monomer	ND	ND	ND	ND	ND	ND	0.00	0.00
a-Methyl styrene	ND	ND	ND	ND	ND	ND	0.00	0.00
Toluene	213.87	0.11	214.00	0.11	216.90	0.11	644.99	0.32
THF	ND	ND	ND	ND	ND	ND	0.00	0.00
Vinyl toluene	ND	ND	ND	ND	ND	ND	0.00	0.00
Xylene (mix isomers):		0.00		0.00		0.00	0.00	0.00
m-Xylene	64.81	0.03	64.85	0.03	65.73	0.03	195.46	0.10
o- Xylene	38.26	0.02	38.29	0.02	38.81	0.02	115.39	0.06
p-Xylene	28.58	0.01	28.60	0.01	28.99	0.01	86.20	0.04
TOTAL	**770.39**		**770.88**		**781.33**		**2,322.60**	**1.16**

HAZARDOUS AIR POLLUTANT (HAP) ESTIMATION SHEET

TERMINAL Marathon Ashland Petroleum, Kenova, WV

TIME PERIOD Potential

EMISSIONS FROM GASOLINE SOURCES: 205.80 TONS/YEAR
EMISSIONS FROM DIESEL/DISTILLATE SOURCES: 19.67 TONS/YEAR

		AVERAGE VAPOR WT %		HAP ESTIMATED EMISSIONS		HAP TOTALS	
CAS NO.	HAP NAME	NORMAL GASOLINE	DIESEL	GASOLINE LB/YR	DIESEL LB/YR	TOTAL LB/YR	TOTAL TON/YR
000-71-43-2	BENZENE	1.8	0.02	7408.97	7.87	**7416.84**	**3.7084**
00100-41-4	ETHYLBENZENE	1.4	0.04	5762.53	15.73	**5778.26**	**2.8891**
00110-54-3	HEXANE (-n)	1	0.01	4116.09	3.93	**4120.03**	**2.0600**
0098-82-8	ISOPROPYL BENZENE (CUMENE)	0.5	-	2058.05	-	**2058.05**	**1.0290**
00108-88-3	TOLUENE	7	0.26	28812.66	102.26	**28914.92**	**14.4575**
540-84-1	2,2,4 TRIMETHYLPENTANE (ISO-O	0.8	-	3292.88	-	**3292.88**	**1.6464**
01330-20-7	XYLENE	7	0.69	28812.66	271.38	**29084.04**	**14.5420**
TOTALS:				**80,263.84**	**401.17**	**80,665.01**	**40.3325**

- Speciated data from BIDS document for the Gasoline Distribution Industry.
- Specific pollutants for diesel have been updated per K. Ritter's letter dated 2/8/95.

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T257
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T257

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,803,478.00
Turnovers:	262.92
Self Supp. Roof? (y/n):	N
No. of Columns:	8.00
Eff. Col. Diam. (ft):	0.67

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	5
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	8
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Double-Deck Roofs	24
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask Sliding Covr, w. Float,Sleeve,Wiper	1

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	491.8105	514.1928	589.1591	580.9413	386.9510	418.5545	434.8388	427.0163	666.4487	660.6286	581.8758	518.2666
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223
Number of Columns:	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Effective Column Diameter (ft):	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700
Net Throughput (gal/mo.):	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Deck Fitting Losses (lb):	218.6861	228.6385	261.9726	258.3186	172.0598	186.1124	193.3533	189.8750	296.3398	293.7519	258.7341	230.4499
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800	309.4800
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	5	1.60	0.00	0.00	72.0268
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2	4.30	17.00	0.38	77.4288
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	8	25.00	0.00	0.00	1,800.6689
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	504.1873
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Double-Deck Roofs	24	0.82	0.53	0.14	177.1858
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	55.8207
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask Sliding Covr, w. Float,Sleeve,Wiper	1	11.00	9.90	0.89	99.0368

Total Losses (lb):	847.3188	879.6536	987.9540	976.0822	695.8331	741.4892	765.0144	753.7136	1,099.6108	1,091.2028	977.4322	885.5389

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 09)	1,667.36	547.29	741.40	0.00	2,956.05
Gasoline (RVP 13.5)	1,247.39	273.64	554.66	0.00	2,075.69
Gasoline (RVP 15)	3,355.93	820.93	1,492.23	0.00	5,669.10
Total:	6,270.68	1,641.87	2,788.29	0.00	10,700.84

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T258
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T258

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,546,889.00
Turnovers:	281.94
Self Supp. Roof? (y/n):	N
No. of Columns:	8.00
Eff. Col. Diam. (ft):	0.67

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	2
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Ungask.	8
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Floating Roof Pan Leg / Hanger Well [12 in.Sleeve]/Adjustable, Ungasketed	14
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	16
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w/o Float	1

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	491.8105	514.1928	589.1591	580.9413	386.9510	418.5545	434.8388	427.0163	666.4487	660.6286	581.8758	518.2666
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223	136.8223
Number of Columns:	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Effective Column Diameter (ft):	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700
Net Throughput (gal/mo.):	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33	83,333,333.33
	00	00	00	00	00	00	00	00	00	00	00	00
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Deck Fitting Losses (lb):	360.0250	376.4098	431.2881	425.2724	283.2637	306.3987	318.3195	312.5931	487.8672	483.6067	425.9565	379.3920
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000	509.5000
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	2	1.60	0.00	0.00	28.8107
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	38.7144
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Ungask.	8	31.00	0.00	0.00	2,232.8294
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	504.1873
Floating Roof Pan Leg / Hanger Well [12 in.Sleeve]/Adjustable, Ungasketed	14	7.90	0.00	0.00	995.7699
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2	6.20	1.20	0.94	111.6415
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	16	2.00	0.37	0.91	288.1070
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w/o Float	1	43.00	270.00	1.40	387.1438

Total Losses (lb):	988.6578	1,027.4249	1,157.2695	1,143.0360	807.0370	861.7755	889.9806	876.4316	1,291.1382	1,281.0576	1,144.6546	1,034.4809

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15)	3,355.93	820.93	2,456.68	0.00	6,633.55
Gasoline (RVP 13.5)	1,247.39	273.64	913.14	0.00	2,434.17
Gasoline (RVP 09)	1,667.36	547.29	1,220.57	0.00	3,435.22
Total:	6,270.68	1,641.87	4,590.39	0.00	12,502.94

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T259
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T259

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,731,517.00
Turnovers:	267.99
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
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:	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	4
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	15
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	8
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Ladder Well (36-in Diam.)/Sliding Cover, Gasketed	1
Roof Drain (3-in. Diameter)/90% Closed	1
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w. Float, Wiper	1

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 09)	Jan	45.61	41.73	49.50	54.87	3.4463	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Feb	47.34	43.06	51.62	54.87	3.5719	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Mar	52.54	47.36	57.72	54.87	3.9731	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 15)	Apr	57.08	51.15	63.02	54.87	7.7230	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	May	61.18	54.96	67.40	54.87	7.4060	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 13.5)	Jun	64.46	58.43	70.49	54.87	7.8654	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 13.5)	Jul	66.04	60.38	71.71	54.87	8.0960	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 13.5)	Aug	65.29	59.86	70.72	54.87	7.9857	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Sep	62.29	56.89	67.68	54.87	8.4951	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 09)	Oct	56.81	51.57	62.05	54.87	4.3289	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Nov	52.07	47.86	56.28	54.87	3.9354	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Dec	47.64	43.98	51.31	54.87	3.5945	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	266.9097	278.1379	314.8641	665.5637	647.0482	706.6114	737.9627	722.8439	769.1405	348.5880	311.3562	280.1687
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.0687	0.0716	0.0810	0.1913	0.1799	0.1965	0.2052	0.2010	0.2210	0.0897	0.0801	0.0721
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.4463	3.5719	3.9731	7.7230	7.4060	7.8654	8.0960	7.9857	8.4951	4.3289	3.9354	3.5945
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	60.0000	62.0000	62.0000	62.0000	62.0000	60.0000	67.0000	67.0000	67.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123
Number of Columns:	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo.):	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Deck Fitting Losses (lb):	58.9694	61.4501	69.5642	147.0456	142.9549	156.1144	163.0410	159.7007	169.9292	77.0149	68.7891	61.8988
Value of Vapor Pressure Function:	0.0687	0.0716	0.0810	0.1913	0.1799	0.1965	0.2052	0.2010	0.2210	0.0897	0.0801	0.0721
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	60.0000	62.0000	62.0000	62.0000	62.0000	60.0000	67.0000	67.0000	67.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700	153.7700
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	60.0000	62.0000	62.0000	62.0000	62.0000	60.0000	67.0000	67.0000	67.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4	1.60	0.00	0.00	55.6978
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2	4.30	17.00	0.38	74.8440
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1	25.00	0.00	0.00	217.5696
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	15	0.82	0.53	0.14	107.0443
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	8	2.00	0.37	0.91	139.2446
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	53.9573
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	4.0903
Ladder Well (36-in Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	487.3560
Roof Drain (3-in. Diameter)/90% Closed	1	1.80	0.14	1.10	15.6650
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	182.7585

Total Losses (lb):	464.4913	478.2002	523.0405	951.2216	928.6154	1,001.3380	1,039.6160	1,021.1569	1,077.6819	564.2152	518.7577	480.6797

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 09)	1,800.02	831.67	397.69	0.00	3,029.38
Gasoline (RVP 13.5)	2,814.47	554.45	621.81	0.00	3,990.73
Gasoline (RVP 15)	1,434.70	277.22	316.97	0.00	2,028.90
Total:	6,049.19	1,663.35	1,336.47	0.00	9,049.01

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T260
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T260

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	4,090,341.00
Turnovers:	244.48
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
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:	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	5
Access Hatch (24-in. Diam.) with Vacuum Breaker/Unbolted, Gasketed (MAP Defined)	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Double-Deck Roofs	24
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Ladder Well (36-in Diam.)/Sliding Cover, Gasketed	1
Roof Drain (3-in. Diameter)/90% Closed	1
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w. Float, Wiper	1

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	491.8105	514.1928	589.1591	580.9413	386.9510	418.5545	434.8388	427.0163	666.4487	660.6286	581.8758	518.2666
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123	138.6123
Number of Columns:	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo.):	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300	83,333,333.3300
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Deck Fitting Losses (lb):	121.2214	126.7382	145.2159	143.1903	95.3756	103.1653	107.1790	105.2509	164.2662	162.8317	143.4207	127.7423
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500	171.5500
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000	120.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	5	1.60	0.00	0.00	72.0268
Access Hatch (24-in. Diam.) with Vacuum Breaker/Unbolted, Gasketed (MAP Defined)	1	31.00	5.20	1.30	279.1037
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2	4.30	17.00	0.38	77.4288
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Double-Deck Roofs	24	0.82	0.53	0.14	177.1858
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1	25.00	0.00	0.00	225.0836
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	4.2316
Ladder Well (36-in Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	504.1873
Roof Drain (3-in. Diameter)/90% Closed	1	1.80	0.14	1.10	16.2060
Slotted Guide-Pole [8 in.] / Sample Well [21 in.]/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	189.0702

Total Losses (lb):	751.6441	779.5432	872.9872	862.7439	620.9389	660.3320	680.6301	670.8794	969.3271	962.0725	863.9088	784.6212

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15)	3,355.93	831.67	827.17	0.00	5,014.78
Gasoline (RVP 13.5)	1,247.39	277.22	307.46	0.00	1,832.07
Gasoline (RVP 09)	1,667.36	554.45	410.97	0.00	2,632.78
Total:	6,270.68	1,663.35	1,545.60	0.00	9,479.63

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T261
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Vertical Fixed Roof Tank
Description:	550035:T261

Tank Dimensions

Shell Height (ft):	50.17
Diameter (ft):	150.00
Liquid Height (ft):	47.41
Avg. Liquid Height (ft):	23.70
Volume (gallons):	6,223,602.00
Turnovers:	175.00
Net Throughput (gal/yr):	1,000,000,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

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

Roof Characteristics

Type:	Cone
Height (ft):	4.69
Slope (ft/ft) (Cone Roof):	0.06

Breather Vent Settings

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

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil No. 2	All	56.53	51.44	61.62	54.87	0.0058	0.0049	0.0068	130.0000			188.00	Option 5: A=12.101, B=8907

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Annual Emission Calculations	
Standing Losses (lb):	860.7843
Vapor Space Volume (cu ft):	495,375.1648
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0354
Vented Vapor Saturation Factor:	0.9915
Tank Vapor Space Volume	
Vapor Space Volume (cu ft):	495,375.1648
Tank Diameter (ft):	150.0000
Vapor Space Outage (ft):	28.0325
Tank Shell Height (ft):	50.1700
Average Liquid Height (ft):	23.7000
Roof Outage (ft):	1.5625
Roof Outage (Cone Roof)	
Roof Outage (ft):	1.5625
Roof Height (ft):	4.6875
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	75.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Daily Avg. Liquid Surface Temp. (deg. R):	516.2007
Daily Average Ambient Temp. (deg. F):	54.8458
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	514.5358
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,246.2101
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0354
Daily Vapor Temperature Range (deg. R):	20.3740
Daily Vapor Pressure Range (psia):	0.0020
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0049
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0068
Daily Avg. Liquid Surface Temp. (deg R):	516.2007
Daily Min. Liquid Surface Temp. (deg R):	511.1072
Daily Max. Liquid Surface Temp. (deg R):	521.2942
Daily Ambient Temp. Range (deg. R):	20.0583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9915
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Space Outage (ft):	28.0325
Working Losses (lb):	6,045.2673

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Annual Net Throughput (gal/yr.):	1,000,000,000.0000
Annual Turnovers:	175.0000
Turnover Factor:	0.3381
Maximum Liquid Volume (gal):	6,223,602.0000
Maximum Liquid Height (ft):	47.4100
Tank Diameter (ft):	150.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	6,906.0516

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil No. 2	6,045.27	860.78	6,906.05

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T262
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Vertical Fixed Roof Tank
Description:	550035:T262

Tank Dimensions

Shell Height (ft):	50.17
Diameter (ft):	150.00
Liquid Height (ft):	47.74
Avg. Liquid Height (ft):	23.87
Volume (gallons):	6,288,746.00
Turnovers:	159.01
Net Throughput (gal/yr):	1,000,000,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

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

Roof Characteristics

Type:	Cone
Height (ft):	4.69
Slope (ft/ft) (Cone Roof):	0.06

Breather Vent Settings

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

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil No. 2	All	56.53	51.44	61.62	54.87	0.0058	0.0049	0.0068	130.0000			188.00	Option 5: A=12.101, B=8907

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Annual Emission Calculations	
Standing Losses (lb):	855.6083
Vapor Space Volume (cu ft):	492,371.0168
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0354
Vented Vapor Saturation Factor:	0.9915
Tank Vapor Space Volume	
Vapor Space Volume (cu ft):	492,371.0168
Tank Diameter (ft):	150.0000
Vapor Space Outage (ft):	27.8625
Tank Shell Height (ft):	50.1700
Average Liquid Height (ft):	23.8700
Roof Outage (ft):	1.5625
Roof Outage (Cone Roof)	
Roof Outage (ft):	1.5625
Roof Height (ft):	4.6875
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	75.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Daily Avg. Liquid Surface Temp. (deg. R):	516.2007
Daily Average Ambient Temp. (deg. F):	54.8458
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	514.5358
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,246.2101
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0354
Daily Vapor Temperature Range (deg. R):	20.3740
Daily Vapor Pressure Range (psia):	0.0020
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0049
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0068
Daily Avg. Liquid Surface Temp. (deg R):	516.2007
Daily Min. Liquid Surface Temp. (deg R):	511.1072
Daily Max. Liquid Surface Temp. (deg R):	521.2942
Daily Ambient Temp. Range (deg. R):	20.0583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9915
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Space Outage (ft):	27.8625
Working Losses (lb):	6,353.4141

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Annual Net Throughput (gal/yr.):	1,000,000,000 .0000
Annual Turnovers:	159.0142
Turnover Factor:	0.3553
Maximum Liquid Volume (gal):	6,288,746.000 0
Maximum Liquid Height (ft):	47.7400
Tank Diameter (ft):	150.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	7,209.0224

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil No. 2	6,353.41	855.61	7,209.02

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T270
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T270

Tank Dimensions

Diameter (ft):	85.00
Volume (gallons):	1,956,497.00
Turnovers:	1,277.79
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:	Mechanical Shoe
Secondary Seal:	None

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	348.3657	364.2199	417.3210	411.5001	274.0903	296.4761	308.0108	302.4698	472.0678	467.9453	412.1620	367.1055
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo.):	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Deck Fitting Losses (lb):	97.5424	101.9816	116.8499	115.2200	76.7453	83.0133	86.2430	84.6916	132.1790	131.0247	115.4054	102.7895
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400	138.0400
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	324.1204
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	126.0468
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	55.8207
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1	19.00	0.00	0.00	171.0635
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1	25.00	0.00	0.00	225.0836
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14	2.00	0.37	0.91	252.0936
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12	0.82	0.53	0.14	88.5929

Total Losses (lb):	913.6013	933.8947	1,001.8641	994.4133	818.5288	847.1826	861.9470	854.8546	1,071.9400	1,066.6631	995.2606	937.5883

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15)	2,377.12	2,806.16	665.59	0.00	5,848.87
Gasoline (RVP 13.5)	883.57	935.39	247.40	0.00	2,066.35
Gasoline (RVP 09)	1,181.05	1,870.77	330.69	0.00	3,382.51
Total:	4,441.73	5,612.32	1,243.69	0.00	11,297.74

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T271
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T271

Tank Dimensions

Diameter (ft):	85.00
Volume (gallons):	1,952,628.00
Turnovers:	1,280.33
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:	Mechanical Shoe
Secondary Seal:	None

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	348.3657	364.2199	417.3210	411.5001	274.0903	296.4761	308.0108	302.4698	472.0678	467.9453	412.1620	367.1055
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932	467.6932
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo.):	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Deck Fitting Losses (lb):	98.1077	102.5726	117.5271	115.8878	77.1900	83.4944	86.7428	85.1824	132.9450	131.7840	116.0742	103.3853
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400	138.8400
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	324.1204
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1	19.00	0.00	0.00	171.0635
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2	6.20	1.20	0.94	111.6415
Automatic Gauge Float Well/Unbolted Cover, Gasketed	2	4.30	17.00	0.38	77.4288
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1	25.00	0.00	0.00	225.0836
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14	2.00	0.37	0.91	252.0936
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12	0.82	0.53	0.14	88.5929

Total Losses (lb):	914.1666	934.4857	1,002.5413	995.0811	818.9735	847.6637	862.4469	855.3454	1,072.7060	1,067.4225	995.9294	938.1840

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15)	2,377.12	2,806.16	669.45	0.00	5,852.73
Gasoline (RVP 13.5)	883.57	935.39	248.83	0.00	2,067.79
Gasoline (RVP 09)	1,181.05	1,870.77	332.61	0.00	3,384.43
Total:	4,441.73	5,612.32	1,250.89	0.00	11,304.95

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Kenova : T272
City:	Kenova
State:	WV
Company:	MPC
Type of Tank:	Internal Floating Roof Tank
Description:	550035:T272

Tank Dimensions

Diameter (ft):	85.00
Volume (gallons):	2,065,596.00
Turnovers:	1,210.30
Self Supp. Roof? (y/n):	N
No. of Columns:	1.00
Eff. Col. Diam. (ft):	0.67

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.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	2
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 15)	Jan	45.61	41.73	49.50	54.87	6.2171	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Feb	47.34	43.06	51.62	54.87	6.4274	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Mar	52.54	47.36	57.72	54.87	7.0956	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 13.5)	Apr	57.08	51.15	63.02	54.87	6.8615	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 09)	May	61.18	54.96	67.40	54.87	4.7194	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jun	64.46	58.43	70.49	54.87	5.0302	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Jul	66.04	60.38	71.71	54.87	5.1866	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 09)	Aug	65.29	59.86	70.72	54.87	5.1118	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 13.5)	Sep	62.29	56.89	67.68	54.87	7.5588	N/A	N/A	62.0000			92.00	Option 4: RVP=13.5, ASTM Slope=3
Gasoline (RVP 15)	Oct	56.81	51.57	62.05	54.87	7.6840	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Nov	52.07	47.86	56.28	54.87	7.0330	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3
Gasoline (RVP 15)	Dec	47.64	43.98	51.31	54.87	6.4651	N/A	N/A	60.0000			92.00	Option 4: RVP=15, ASTM Slope=3

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	348.3657	364.2199	417.3210	411.5001	274.0903	296.4761	308.0108	302.4698	472.0678	467.9453	412.1620	367.1055
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.2171	6.4274	7.0956	6.8615	4.7194	5.0302	5.1866	5.1118	7.5588	7.6840	7.0330	6.4651
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986	465.8986
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Effective Column Diameter (ft):	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700
Net Throughput (gal/mo.):	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000	208,333,333.3000
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000	5.6000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Deck Fitting Losses (lb):	111.8162	116.9050	133.9490	132.0807	87.9758	95.1610	98.8633	97.0848	151.5213	150.1981	132.2931	117.8312
Value of Vapor Pressure Function:	0.1413	0.1478	0.1693	0.1616	0.0996	0.1077	0.1119	0.1099	0.1853	0.1898	0.1672	0.1489
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400	158.2400
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000	85.0000
Vapor Molecular Weight (lb/lb-mole):	60.0000	60.0000	60.0000	62.0000	67.0000	67.0000	67.0000	67.0000	62.0000	60.0000	60.0000	60.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	324.1204
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	2	14.00	5.40	1.10	252.0936
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	2	6.20	1.20	0.94	111.6415
Combo Ladder Well / Slotted Guide Pole-Sample Well/Without Float, Vaporless Sleeve (MAP Defined)	1	19.00	0.00	0.00	171.0635
Fixed Roof Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	1	25.00	0.00	0.00	225.0836
Floating Roof Pan Leg (3 in. Dia.) [30 in. Sleeve]/Adjustable, Pontoon Area, Ungasketed	14	2.00	0.37	0.91	252.0936
Floating Roof Pan Leg (3 in. Dia.) [48 in. Sleeve]/Adjustable, Center Area, Ungasketed	12	0.82	0.53	0.14	88.5929

Total Losses (lb):	926.0805	947.0234	1,017.1686	1,009.4793	827.9646	857.5357	872.7727	865.4532	1,089.4877	1,084.0419	1,010.3537	950.8353

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

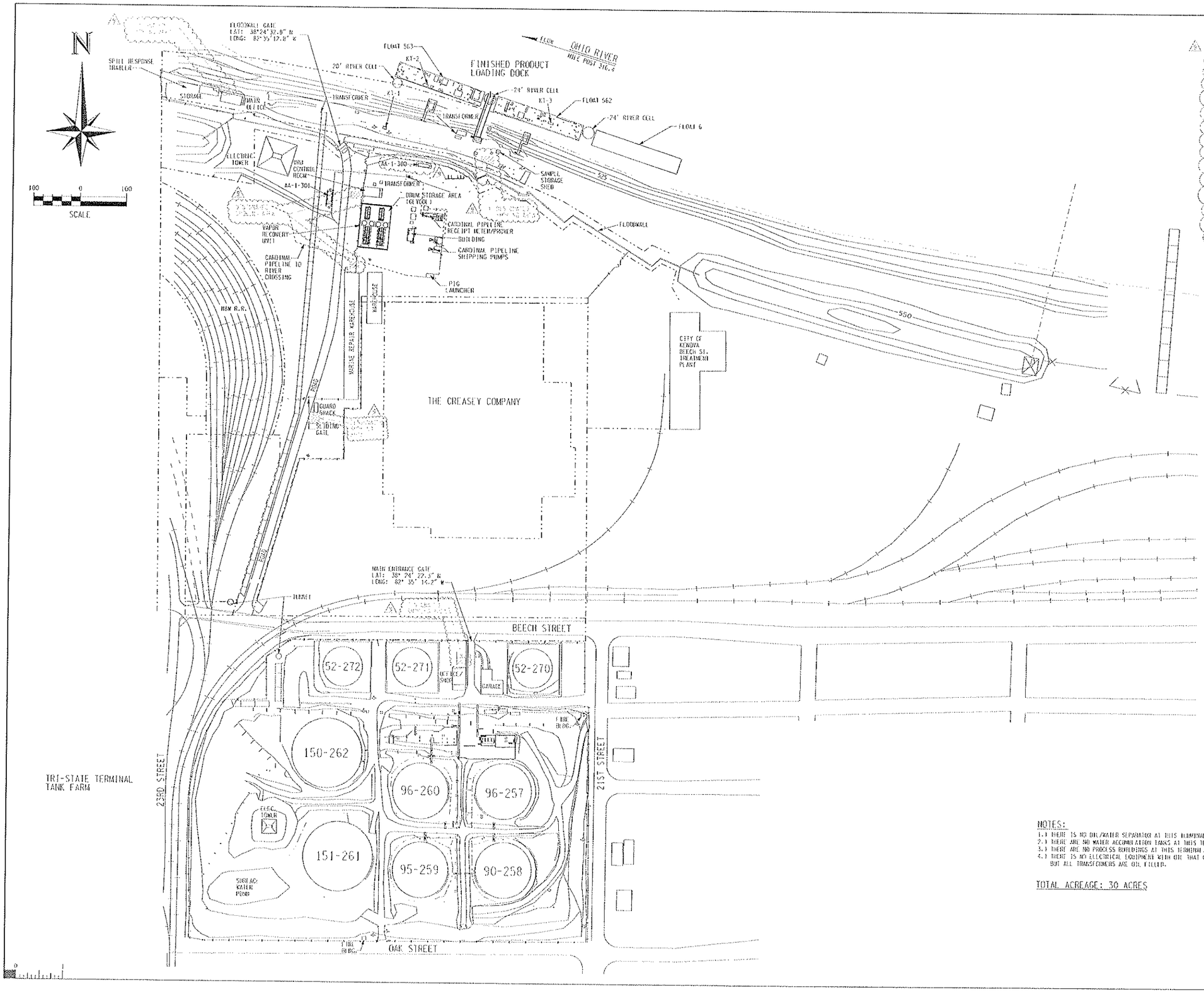
Annual Emissions Report

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 15)	2,377.12	2,795.39	762.99	0.00	5,935.50
Gasoline (RVP 13.5)	883.57	931.80	283.60	0.00	2,098.97
Gasoline (RVP 09)	1,181.05	1,863.59	379.08	0.00	3,423.73
Total:	4,441.73	5,590.78	1,425.68	0.00	11,458.20

ARCADIS

Appendix C

Maps and Figures



TANK INFORMATION

TANK NO.	DIMENSIONS	SHELL CAPACITY (GALLONS)	COMMODITY	ROOF TYPE
96-257	120'-0" DIA. x 55'-0" HT.	4,085,012	GASOLINE	C.F.
90-258	120'-0" DIA. x 52'-0" HT.	3,809,790	GASOLINE	C.F.
95-259	120'-0" DIA. x 55'-0" HT.	4,070,514	GASOLINE	C.F.
96-260	120'-0" DIA. x 58'-11" HT.	4,344,900	GASOLINE	C.F.
151-261	150'-0" DIA. x 50'-2" HT.	6,355,944	NO. 2 FUEL OIL	CONE
150-262	150'-0" DIA. x 50'-2" HT.	6,471,170	NO. 2 FUEL OIL	CONE
52-270	85'-0" DIA. x 56'-0" HT.	2,186,646	GASOLINE	C.F.
52-271	85'-0" DIA. x 56'-0" HT.	2,179,717	GASOLINE	C.F.
52-272	85'-0" DIA. x 56'-0" HT.	2,188,544	NO. 2 FUEL OIL	C.F.
KT-1	3'-4" DIA. x 5'-10" LG.	380	OUT OF SERVICE	HORIZ.
KT-2	4'-0" DIA. x 10'-8" LG.	1,000	SLOP OIL	HORIZ.
KT-3	4'-0" DIA. x 10'-8" LG.	1,000	SLOP OIL	HORIZ.
AA-1-300	5'-3" DIA. x 24'-0" LG.	3,990	DIESEL FUEL	HORIZ.
AA-1-301	8'-0" DIA. x 21'-4" LG.	7,999	ADDITIVE	HORIZ.

NOTES:

1.) THERE IS NO OIL/WATER SEPARATOR AT THIS TERMINAL.
2.) THERE ARE NO WATER ACCUMULATION TANKS AT THIS TERMINAL.
3.) THERE ARE NO PROCESS BUILDINGS AT THIS TERMINAL.
4.) THERE IS NO ELECTRICAL EQUIPMENT WITH OIL THAT CONTAINS PCB'S, BUT ALL TRANSFORMERS ARE OIL FILLED.

TOTAL ACREAGE: 30 ACRES

NO	DATE	DFTR.	REVISIONS	BY
2	10/18/02	RBK	UPDATED FOR CORE DRAWING SET	LF
3	1/13/04	TLP	REV. CHART & ADD SHACK & CARDINAL METER/PROVER	TM
4	2/23/05	TLP	REVISE TANK INFORMATION CHART	TM
5	8/19/04	TLP	REVISE TANK INFORMATION CHART	
6	8/7/05	TLP	ADD TANK AND CHART & ADD TANK AA-1-301	TM/DB
7	09-15-06	DBD	AS-BUILT PER F.A.I. #42280 AFE 2005-5647	KB
8	12-01-06	DBD	REPLACED KT-2 TANK W/ 1000 GAL. DOUBLEWALL TANK	TM
A	10-12-06	TL	REV. CHART & ADD DESIGNATED DIKE AND AREAS	TM

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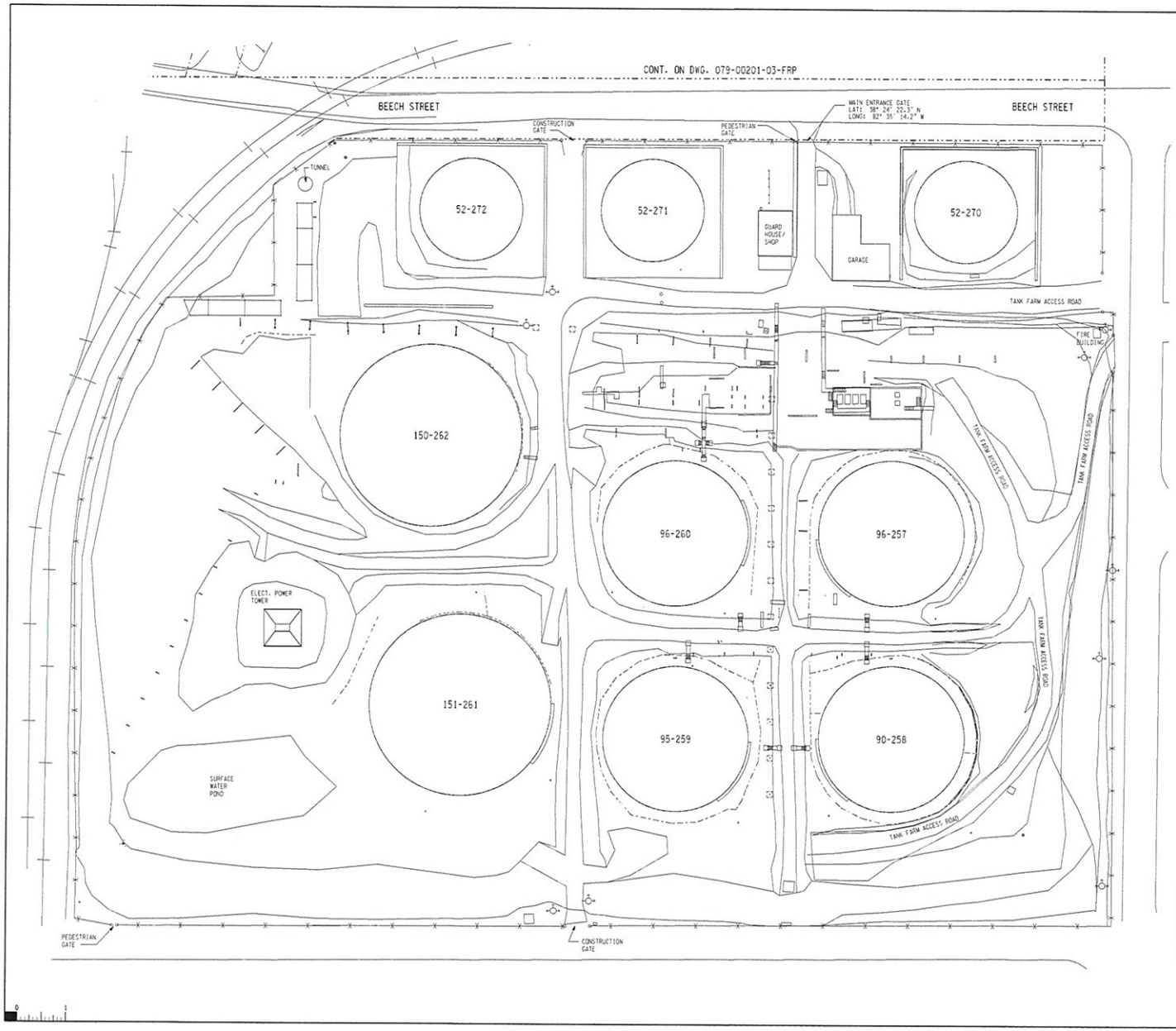
MARATHON

SITE DIAGRAM
(SHEET 1 OF 3)

KENOVA, WV TERMINAL

SCALE	1"=100'-0"
DATE	5-11-01
DRAFTER	R.K. PRICHARD
DESIGNER	
AFE	

UNIT-ENG-SHT-TYPE
DWG NO 079-00201-01-TOP



TANK INFORMATION

TANK NO.	DIMENSIONS	SHELL CAPACITY (GALLONS)	COMMODITY	ROOF TYPE
96-257	120'-0" DIA. x 55'-0" HT.	4,065,012	GASOLINE	C.F.
90-258	120'-0" DIA. x 52'-0" HT.	3,800,790	GASOLINE	C.F.
95-259	120'-0" DIA. x 55'-0" HT.	4,070,514	GASOLINE	C.F.
96-260	120'-0" DIA. x 58'-11" HT.	4,344,300	GASOLINE	C.F.
151-261	150'-0" DIA. x 50'-2" HT.	6,355,944	NO. 2 FUEL OIL	CONE
150-262	150'-0" DIA. x 50'-2" HT.	6,421,170	NO. 2 FUEL OIL	CONE
52-270	85'-0" DIA. x 56'-0" HT.	2,186,646	GASOLINE	C.F.
52-271	85'-0" DIA. x 56'-0" HT.	2,179,212	GASOLINE	C.F.
52-272	85'-0" DIA. x 56'-0" HT.	2,189,544	NO. 2 FUEL OIL	C.F.

N

40 0 40
SCALE

NOTES:

1.) THERE IS NO OIL/WATER SEPARATOR AT THIS TERMINAL.
2.) THERE ARE NO WATER ACCUMULATION TANKS AT THIS TERMINAL.
3.) THERE ARE NO PROCESS BUILDINGS AT THIS TERMINAL.
4.) THERE IS NO ELECTRICAL EQUIPMENT WITH OIL THAT CONTAINS PCB'S.
BUT ALL TRANSFORMERS ARE OIL FILLED.
5.) THERE IS NO LOADING RACK AT THIS TERMINAL.

TOTAL ACREAGE: 30 ACRES

NO	DATE	DFTR.	REVISIONS	DWN.
1	5-30-02	TLP	REVISED TANK INFORMATION CHART	
2	10/19/02	KSH	UPDATED FOR CORE DRAWING SET	LF
3	7/13/04	TLP	REVISED TANK INFO. CHART & ADDED FDND NOTE	FN
4	7/20/04	TLP	REVISED TANK INFO. CHART	FN
5	8/18/04	TLP	REVISED TANK INFO. CHART	
6	8/1/05	TLP	REVISED TANK INFORMATION CHART	FN
7	2-15-06	DDD	AS-BUILT PER FALL HAZARD AFE 2005-5687	JB
8	10-19-06	TLP	REVISED TANK INFO. CHART	FN

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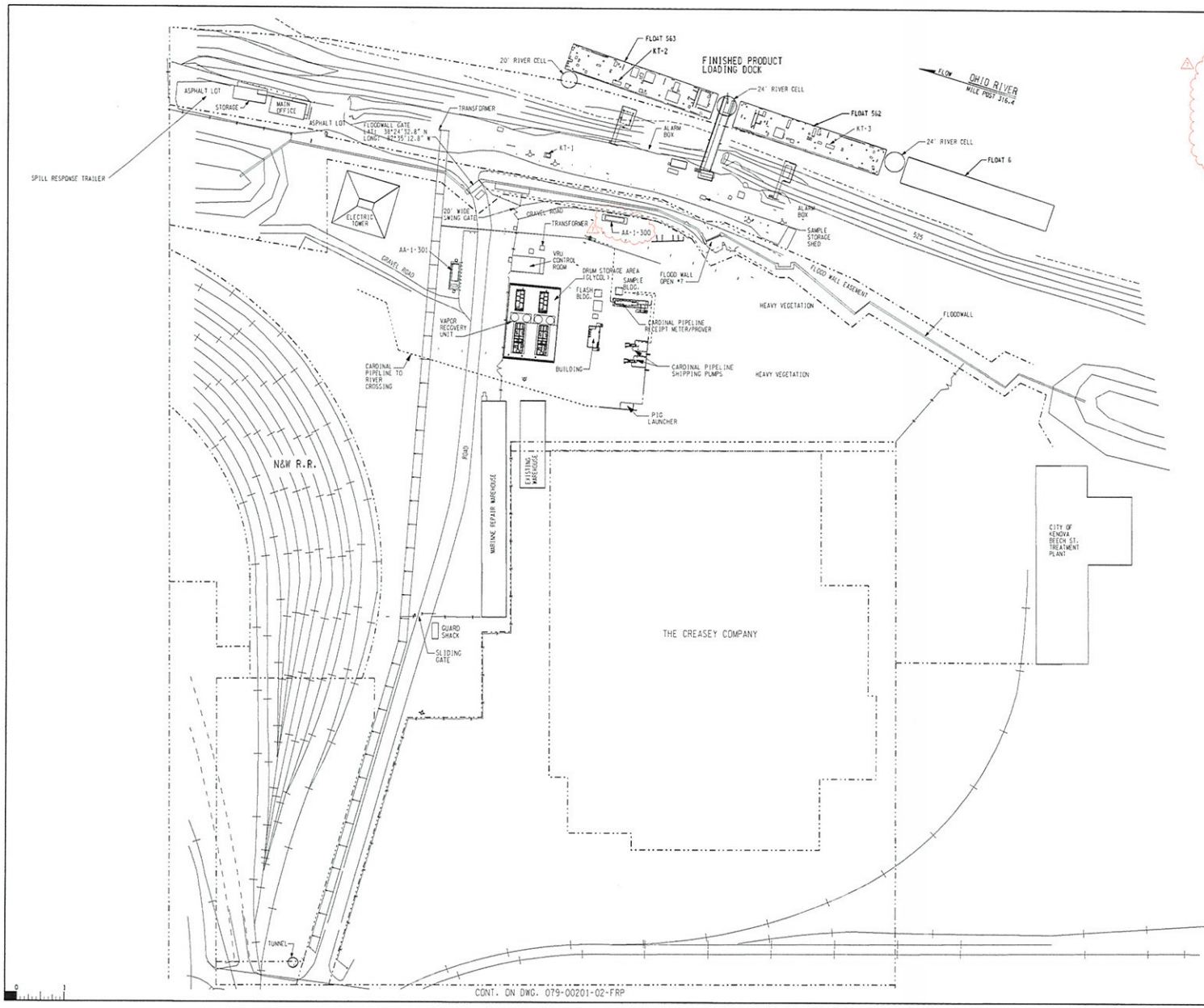
MARATHON

SITE DIAGRAM
(SHEET 2 OF 3)

KENOVA, WV TERMINAL

SCALE	1"=40'-0"
DATE	9-11-01
DRAFTER	B.K. PRICHARD
DESIGNER	
AFE	

UNIT-DWG-SHT-TYPE
DWG NO 079-00201-02-FRP



TANK INFORMATION

TANK NO.	DIMENSIONS	SHELL CAPACITY (GALLONS)	COMMODITY	ROOF TYPE
KT-1	3'-4" DIA. x 5'-10" LG.	380	OUT OF SERVICE	HORIZ.
KT-2	4'-0" DIA. x 10'-8" LG.	1,000	SLOP OIL	HORIZ.
KT-3	4'-0" DIA. x 10'-8" LG.	1,000	SLOP OIL	HORIZ.
AA-1-300	5'-3" DIA. x 24'-0" LG.	3,990	DIESEL DYE	HORIZ.
AA-1-301	8'-0" DIA. x 21'-4" LG.	7,995	ADDITIVE	HORIZ.

N

SCALE

NO	DATE	DFTR.	REVISIONS	DSNR.
1	5-30-02	TLP	ADDED TKS KT-1, KT-2, KT-3 & DIESEL TK	
2	10/18/02	KVW	UPDATED CORE DRAWING SET	LF
3	1/13/04	TLP	REVISED TANK CHART & ADD CARDINAL METER/PROVER	FN
4	8/1/05	TLP	REV. TANK INFO. CHART & ADD TANK AA-1-301	FN/GR
5	02-15-06	DDD	AS-BUILT PER FALL HAZARD AFE 2005-5687	JB
6	12-01-06	DDD	REPLACE KT-2 TANK W/ 1000 GAL. FIBERGLASS TANK	TDK
7	12-19-06	TLP	REVISED TANK INFO. CHART	FN

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MARATHON

SITE DIAGRAM
(SHEET 3 OF 3)

KENOVA, WV TERMINAL

SCALE	1"=60'-0"
DATE	9-17-01
DRAFTER	B.K. PRICHARD
DESIGNER	
AFE	
DWG NO	UNIT-DWG-SHT-TYPE 079-00201-03-FRP