CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES

PLAN APPROVAL

Approval No: **IP18-000352** Date: **XXXXX**
Plant ID: **10029**

Owner: Kinder Morgan Liquid Terminals, LLC
6310 West Passyunk Ave,
Philadelphia, PA 19153

Source: Kinder Morgan Point Breeze
Location: 6310 West Passyunk Ave,
Philadelphia, PA 19153

Contact: John Grelis
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Pursuant to the provisions of Title 3 of the Philadelphia Code, the Air Management Code of February 17, 1995, as amended, and after due consideration of a plan approval application received under the rules and regulations of the Philadelphia Air Pollution Control Board, the City of Philadelphia, Department of Public Health, Air Management Services (AMS) on **XXXXX** approved plans for the installation and temporary operation of the air contamination device(s) described below:

- Increase the facility-wide volatile organic compound (VOC) emission limit from less than 25 tons per rolling 12-month period to 41.55 tons per rolling 12-month period.
- Increase the loading rack (LRACK) throughput to 424,400,000 gallons per rolling 12-month period for gasoline (controlled loading operations).
- The current loading rack (LRACK) throughput limit of 36,500,000 gallons per rolling 12-month period for diesel fuel (controlled loading operations) remains unchanged.
- No changes have been made to the gallons per minute gasoline loading capacity for LRACK.
- Correct the tank type for Tanks 1-4 and 8(TK01 – TK04, and TK08) from external floating roof or breather vent to internal floating roof.
- Existing emission sources;

  Tank 1 (2,923,200 gal – stores gasoline), Internal Floating Roof
  Tank 2 (2,923,200 gal – stores gasoline), Internal Floating Roof
  Tank 3 (2,923,200 gal – stores gasoline), Internal Floating Roof
  Tank 4 (2,074,800 gal – stores gasoline), Internal Floating Roof
  Tank 5 (3,036,000 gal – stores gasoline), Internal Floating Roof
  Tank 7 (20,000 gal – stores biodiesel), Fixed Roof Tank
  Tank 8 (2,133,600 gal – stores diesel fuel), Internal Floating Roof
  Tank 9 (2,620,800 gal – stores gasoline), Internal Floating Roof
  Tank 11 (10,000 gal – stores additive for gasoline), Fixed Roof Tank
  Tank 12 (10,000 gal – stores additive for gasoline), Fixed Roof Tank
  Loading Rack;
  - LRACK - Four (4) Bay Truck Loading/Unloading Rack (6,600 gal/min capacity – loads motor fuels –controlled loading operations)

Control Devices;

- CD01 – Secondary Control Device Zink Vapor Combustion Unit (VCU) (40 MMBTU/hr burner) (4,996 gallons/min capacity) controls emissions from LRACK, burns Natural Gas/Propane
- CD02 – Primary Control Device John Zink Hydrocarbon Vapor Recovery Unit (VRU) (902 ACFM @ 80 degrees Fahrenheit) (Two (2) 7,000 lb Granulated Activated Carbon Vessels) with VOC Servomex Continuous Emissions Monitoring System (CEMS) controls emissions from LRACK

This Plan Approval expires on **XXXXX**. If construction has not been completed by this date, an application for either an extension or new plan approval must be made. The conditions of this plan approval will remain in effect until they are incorporated in an operating permit.

This Plan Approval is subject to conditions prescribed in the attachment.

_____
Edward Wiener
Chief of Source Registration
(215) 685-9426

PLAN APPROVAL CONDITIONS
PLAN APPROVAL NO. IP18-000352
COMPANY: KINDER MORGAN POINT BREEZE TERMINAL

1. Each tank, loading rack, control device, and CEMS in the facility shall be installed, operated, and maintained in accordance with the specifications in the application (as approved herein), with the manufacturer's specifications, and good operating practices. [25 Pa Code 127(c)]

Emission Limitations

Facility

2. Hazardous Air Pollutant (HAP) emissions from the facility shall be less than 10 tons per rolling 12-month period for any single HAP and 25 tons per rolling 12-month period for total HAPs. [Limitation accepted to maintain emission limits below Title V thresholds]

Loading Rack (LRACK) and Control Devices (CD01 and CD02)

3. Volatile Organic Compound (VOC) emissions from the VRU (CD-02) due to the loading of gasoline shall not exceed the following: [Compliance with this assures compliance with 40 CFR 60.502(c), 25 Pa Code §129.59 & AMR V, Section V, 40 CFR 63 Subpart BBBBBB Table 2 (1)(b)]
   (a) 10 mg/L of gasoline (as defined in 40 CFR 60.501 or 25 PA Code 121.1) loaded, or 33.3 pounds per hour;

4. When loading is controlled by the secondary control device (CD-01), Zink Vapor Combustion Unit (CD-01) shall continue to comply with the following emission limits [AMR XIII, Section II; AMS Plan Approval Nos. 08094 dated 4/30/08, IP18-000169 dated 10/17/2018, and Application]:
   (a) Volatile Organic Compound (VOC) emissions from the Zink Vapor Combustion Unit (CD-01) due to the loading of gasoline shall not exceed 10 mg/L of gasoline (as defined in 40 CFR 60.501 or 25 PA Code 121.1) loaded, and 25.4 pounds per hour.
   (b) Nitrogen Oxide (NOx) emissions from the VCU (CD-01) shall not exceed 4 mg/L of gasoline, 10.2 pounds per hour, 10.2 tons per rolling 12-month period.
   (c) Carbon Monoxide (CO) emissions from the VCU (CD-01) shall not exceed 10 mg/L of gasoline loaded, 25.4 pounds per hour, or 25.4 tons per rolling 12-month period.
   (d) The VCU (CD-01) shall be limited to 2,000 hours per rolling 12-month period of operation.

5. Total throughput for the loading rack (LRACK) shall not exceed 424,400,000 gallons of gasoline or 36,500,000 gallons of diesel fuel based on a 12-month rolling period [Application and assures compliance with the Synthetic Minor HAP emission limit].
   (a) VOC emissions from controlled diesel fuel loading operations at the facility shall not exceed 0.1 tons per rolling 12-month period. [Application and assures compliance with 25 Pa Code 129.97(c)(2)]

6. VOC emissions from the facility shall be less than 41.55 tons per rolling 12-month period. [Application]

7. VOC emissions from the loading of gasoline shall not exceed 37.6 tons per rolling 12-month period [Application].

8. The Permittee shall not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source, in such a manner that the malodors are detectable outside the property. [25 Pa Code §123.31(b)]

Work Practice Standards

Facility

9. Gasoline may not be spilled or discarded in sewers or stored in open containers or handled in a manner that would result in uncontrolled evaporation to the atmosphere. [25 Pa Code §129.62(a)]

10. Point Breeze Terminal, at all times, shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with good safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to AMS, which may include, but not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of Point Breeze Terminal [40 CFR 63.11085]

11. Kinder Morgan Point Breeze Terminal shall not sell, deliver for use, use or exchange in trade for use in Philadelphia any gasoline having a Reid Vapor Pressure greater than 9.0 during May 1 through September 15 of every year. [AMR V, Section V.D]

Tanks

12. Storage Tanks 7, 11, and 12 shall not contain volatile organic compounds with a vapor pressure greater than 1.5 psia under actual storage conditions. [25 Pa Code 129.57]

13. Tanks 1, 2, 3, 4, 5, 8, & 9 shall equip each storage vessel with the following [40 CFR Part 60.112b, Assures Compliance with 40 CFR 63 Subpart BBBBBB]:
    (a) A fixed roof in combination with an internal floating roof meeting the following specifications:
        (i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
        (ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
            (A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the

storage vessel and the floating roof continuously around the circumference of the tank.

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

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

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.[Assures compliance with 25 PA Code 129.56(c)]

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

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

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

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(x) There are no holes, tears or other openings in the seal or seal fabric or materials.[25 Pa Code 129.56(c)(i)]

14. Tanks 1-5, 8, & 9 shall only store organic liquids with a maximum true vapor pressure of less than 76.6 kPa as stored [AMR XIII, Section II; Plan Approval No. 10294 dated 8/23/2011, and Plan Approval No. 08094 dated 4/30/2008]

15. The Permittee shall not load any organic material having a Reid vapor pressure of 4.0 pounds or greater from any tank truck, tank car, or trailer into any stationary storage container. [Exemption from AMR V Section V.B(1)]

16. For Tanks 1, 2, 3, 4, 5, 8, & 9, the Permittee shall comply with each of the following: [40 CFR 60.113b (a) - Assures Compliance with 40 CFR 63 Subpart BBBBBB]
    (a) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
    (b) Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the AMS in the inspection report required in 40 CFR Part 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
        (i) For vessels equipped with a double-seal system as specified in 40 CFR Part 60.112b (a)(1)(ii)(B):
        (ii) Visually inspect the vessel as specified in paragraph (d) of this section at least every 5 years; or
    (c) Visually inspect the vessel as specified in paragraph (b) of this section.
    (d) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (b) and (c)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (c)(ii) of this section.

Loading Rack (LRACK) and Control Devices (CD01 and CD02)

17. All gasoline and fuel grade diesel loading/unloading from the four bay Tank Truck Rack (LRACK) shall be controlled by the Carbon Adsorption System (Hydrocarbon VRU CD-02). If the VRU is not in operation, all gasoline and fuel grade diesel loading/unloading from the four bay Tank Truck Rack (LRACK) shall be controlled

by the Zink Vapor Combustion Unit (CD-01). [AMR XIII, Section II and AMS Plan Approval No. IP18-000169 dated 10/17/18]

18. Loading rack (LRACK) throughput shall not exceed the following: [AMR XIII, Section II and AMS Plan Approval No. IP18-000169 dated 10/17/18]
    (a) 6,600 gallons per minute (gpm) of petroleum products when venting to the VRU (CD-02);
    (b) 4,996 gpm of petroleum products when venting to the Zink Vapor Combustion Unit (CD-01).

19. Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected. [40 CFR 60.502(j)]

20. The Permittee shall perform a monthly leak inspection of all equipment in gasoline service. For this inspection, detection methods incorporating sight, sound, and smell are acceptable. Each piece of equipment shall be inspected during the loading of a gasoline cargo tank [40 CFR 63.11089(a)]
    (a) A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility. [40 CFR 63.11089(b)]
    (b) Each detection of a liquid or vapor leak shall be recorded in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in paragraph (c) below [40 CFR 63.11089(c)]
    (c) Delay of repair of leaking equipment will be allowed upon demonstration to the Administrator that the repair is not feasible within 15 days. The owner or operator shall provide in the semiannual report, the reason(s) why the repair was not feasible and the date each repair was completed. [40 CFR 63.11089(d)]

21. No person shall cause, suffer, allow or permit volatile organic compounds (VOC) to be emitted from leaking flanges, gaskets, seals, connections, joints, fittings or other process equipment components not involving moving parts, nor shall any person cause, suffer, allow or permit VOC to be emitted from leaking valves, pumps, compressors, safety pressure relief devices or other process equipment components involving moving parts such that [AMR V, Section XIII]:
    (a) The VOC emission from any leaking process equipment component results in a VOC in air concentration of 10,000 parts per million by volume (ppmv), or greater, when measured by test methods approved by the Department; or
    (b) The VOC emission is in a liquid state at the point(s) of discharge into the atmosphere.

22. The Permittee shall implement a visual leak detection and repair (LDAR) program for all pumps, valves, and flanges in non-gasoline VOC service. This equipment shall be inspected quarterly in non-gasoline VOC service. VOC material, including HAP, with a vapor pressure of less than 0.044 psia and 68 degrees Fahrenheit is exempt from the leak provisions of AMR V, Section XIII.A. In addition, any VOC leak must be repaired or the defective component removed from service within 15 calendar days after detection of that leak or it shall be deemed a permit deviation. The facility must maintain a record of each leak detailing the nature and timeliness of repair.

23. The facility shall be equipped with a vapor collection system designed to collect the total organic compound vapors displaced from tank trucks during product loading. [40 CFR 60.502(a)]

24. The vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack. [40 CFR 63 Subpart BBBBBB Table 2(1c), 40 CFR 60.502(d)]

25. Loadings of liquid product into gasoline tank trucks at the facility shall be limited to vapor-tight gasoline tank trucks according to the procedures in 40 CFR 60.502(e), and 40 CFR 63 Subpart BBBBBB Table 2(1d).

26. The Permittee shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system. [40 CFR 60.502(f)]

27. The Permittee shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks. [40 CFR 60.502(g)]

28. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR 60.503(d). [40 CFR 60.502(h)]

29. No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water). [40 CFR 60.502(i)]

30. An owner or operator of a bulk gasoline plant, bulk gasoline terminal, tank truck or trailer or stationary storage tank to which 25 Pa Code§ 129.59, § 129.60(b) or (c) or § 129.61 (relating to bulk gasoline terminals; bulk gasoline plants; and small gasoline storage tank control (Stage I control)) apply may not permit the transfer of gasoline between the tank truck or trailer and a stationary storage tank unless the following conditions are met [25 PA Code 129.62(b)(1)-(4)]:
    (a) The vapor balance system is in good working order and is designed and operated in

a manner that prevents:

(i) Gauge pressure from exceeding 18 inches of H2O (4500 pascals) and vacuum from exceeding 6 inches of water (1500 pascals) in the gasoline tank truck.

(ii) A reading equal to or greater than 100% of the lower explosive limit—LEL, measured as propane—at 1 inch from points on the perimeter of a potential leak source when measured by the method referenced in § 139.14 (relating to emissions of VOCs) during loading or unloading operations at small gasoline storage tanks, bulk plants and bulk terminals.

(iii) Avoidable liquid leaks during loading or unloading operations at small gasoline storage tanks, bulk plants and bulk terminals.

(b) A truck, vapor balance system or vapor disposal system, if applicable, that exceeds the limits in paragraphs (a)(i) through (a)(iii) above is repaired and retested within 15 days.

(c) There are no visually- or audibly-detectable leaks in the tank truck's or trailer's pressure/vacuum relief valves and hatch covers, the truck tanks or storage tanks, or associated vapor and liquid lines during loading or unloading.

(d) The pressure and vacuum relief valves on storage vessels and tank trucks or trailers are set to release at no less than 0.7 psig (4.8 kilopascals) of pressure or 0.3 psig (2.1 kilopascals) of vacuum or the highest allowable pressure and vacuum as specified in State or local fire codes, the National Fire Prevention Association guidelines or other National consensus standards acceptable to the Department. Upon demonstration by the owner or operator of an underground small gasoline storage tank that the vapor balance system specified in paragraph (a) above will achieve a 90% vapor recovery efficiency without a pressure and vacuum relief valve and that an interlock system, sufficient to ensure connection of the vapor recovery line prior to delivery of the gasoline, will be used—no pressure and vacuum relief valve is required. The vacuum setting on the pressure and vacuum relief valve on an underground storage tank may be set at the lowest vacuum setting which is sufficient to keep the vent closed at zero pressure and vacuum.

31. The Permittee may not allow a gasoline tank truck subject to 25 Pa Code § 129.59, § 129.60 or § 129.61 to be filled or emptied in a geographic area specified in § 129.61(a) unless the gasoline tank truck [25 PA Code 129.62(c)(1)-(4)]:

(a) Has been tested by the owner or operator within the immediately preceding 12 months in accordance with §139.14.

(b) Sustains a pressure change of no more than 750 pascals (3 inches of H2O) in 5 minutes when pressurized to a gauge pressure of 18 inches of H2O (4,500 pascals) or evacuated to a gauge pressure of 6 inches of H2O (1,500 pascals) during the testing required in paragraph (a) above.

(c) Is repaired by the owner or operator and retested within 15 days of testing if it does not meet the criteria in paragraph (b) above.

(d) Displays a clear marking near the Department of Transportation Certification plate required by 49 CFR 178.340-10b (relating to certification), which shows the most recent date upon which the gasoline tank truck passed the test required in this subsection.

(e) Gasoline tank trucks with a rated capacity of less than 4,800 gallons are exempt from this Condition.

Testing Requirements
Loading Rack (LRACK) and Control Devices (CD01 and CD02)

32. The Permittee shall perform a stack test on the VCU (CD01) for VOC, NOx & CO emissions during the months of June 1st to September 1st, no later than September 1, 2022. The performance test for VOC, NOx, & CO shall demonstrate compliance with emission limits in Conditions 4(a)-(c). The Permittee shall obtain AMS approval of the test protocol prior to the test date. AMS must be notified at least 30 days prior to the actual testing in order that representatives from the agency may schedule to observe the conduct of the test. The test report shall be submitted within 60 days of completion of test to AMS.
    (a) The test shall meet the requirements of 40 CFR 60.503 & 40 CFR 63 Subpart BBBBBB;
    (b) The calculated VOC ppmvd shall be equivalent to 10 mg/L of gasoline loaded, and the sample calculations used for verification of the emission shall be included;
    (c) U.S.E.P.A. Reference Method 21 shall be used for volatile organic compound leaks. Method 21 shall be conducted immediately before the performance tests are performed, as per the requirements of 40 CFR §60.503(b);
    (d) The performance tests shall meet the requirements of 40 CFR §60.503(d);

33. Within 60 days after achieving maximum production rate, but not later than 180 days after initial startup, the Permittee shall conduct an initial performance test on the VRU (CD02) for VOC emissions in accordance with 40 CFR 60.8 and 60.503 and for VOC emissions. A test protocol shall be submitted to AMS for approval at least 30 days prior to the test. The test report shall be submitted within 60 days of completion of test to AMS. The performance test shall meet the requirements listed in AMS Plan Approval No. IP18-000169 dated 10/17/18 [AMR XIII, Section II].

Monitoring and Recordkeeping Requirements
Facility

34. The Permittee shall record all verification that HAP emissions are less than 10 tons per rolling 12-month period for any singular HAP and 25 tons per rolling 12-month period for total HAPs. Verification shall be based on most recent AMS approved stack test results for the control devices and material balances. [Compliance with the throughput limits in Condition 5, the controlled loading requirements of Condition 17, and the VOC emission limits in Conditions 3(a) and 4(a) assure compliance with the facility wide HAP of Condition 2]

35. The Permittee shall record all verification that VOC emissions from the facility are less than 41.55 tons per rolling 12-month period. Verification shall be based on AP-42 Chapter 5.2 emission factors, most recent AMS approved stack test results for the control devices, the emission limits for gasoline loading from Conditions 3(a) and 4(a), or material balances. [Compliance with the throughput limits in

Condition 5, the controlled loading requirements of Condition 17, and the VOC emission limits in Conditions 3(a) and 4(a) assure compliance with the facility wide emission limit of 41.55 tons of VOC per rolling 12-month period]

36. Within 90 days of the Plan Approval issuance date the facility shall submit a Title V/ State Operating Permit application.

Tanks

37. The Permittee shall keep records of the volatile organic liquid stored, period of storage, and maximum true vapor pressure of the stored liquid in each tank.

38. The Permittee shall keep records as required in 40 CFR 60.115b for Tanks 1, 2, 3, 4, 5, 8, and 9; and records required in 40 CFR 60.116b for all tanks.

39. Records of each inspection required. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b]

Loading Rack (LRACK) and Control Devices (CD01 and CD02)

40. The Permittee shall monitor and record the total throughput for the loading rack (LRACK) monthly and for a 12-month rolling period, calculated monthly. [Compliance with the throughput limits in Condition 5 and the emission limits in Conditions 3(a) and 4(a) assures compliance with the gasoline loading emission limit of 37.6 tons of VOC per rolling 12-month period of Condition 7]

41. The Permittee shall record all verification that VOC emissions from the loading of gasoline is less than 37.6 tons per rolling 12-month period. Verification shall be based on AP-42 Chapter 5.2 emission factors, most recent AMS approved stack test results for the control devices, the emission limits for gasoline loading from Conditions 3(a) and 4(a), or material balances. [Compliance with the throughput limits in Condition 5 and the emission limits in Conditions 3(a) and 4(a) assures compliance with the loading of gasoline emission limit of 37.6 tons of VOC per rolling 12-month period]

42. The Permittee shall record all verification that VOC emissions from the controlled loading of diesel is less than 0.1 tons per rolling 12-month period. Verification shall be based on AP-42 Chapter 5.2 emission factors, most recent AMS approved stack test results for the control devices, the emission limits for diesel loading from Conditions 3(a) and 4(a), or material balances. [Compliance with the throughput limits in Condition 5 and the controlled loading requirements of Condition 17 assures compliance with the controlled loading of diesel emission limit of 0.1 tons of VOC per rolling 12-month period]

43. The Permittee shall monitor and record the gallons per minute throughput for the loading rack (LRACK) every minute to demonstrate compliance with Condition 18.

44. The Permittee shall monitor and record the hours of operation per rolling 12-month period for the VCU (CD-01) demonstrate compliance with Condition 4(d).

45. The Permittee shall monitor the operation of the carbon adsorption system by installing a continuous emissions monitoring system (CEMS) capable to measuring organic compound concentration in the exhaust air stream. [40 CFR 63.11092(b)(1)(i)(A)]

46. The Permittee shall keep records of the monthly and quarterly leak detection and repair program.

47. Reporting and recordkeeping shall be as follows [25 PA Code 129.62(d)]:
    (a) The Permittee shall maintain records of certification testing and repairs. The records shall identify the gasoline tank truck, vapor collection system or vapor control system; the date of the test or repair; and, if applicable, the type of repair and the date of retest. The records shall be maintained in a legible, readily-available condition for 1 year after the date the testing or repair was completed.
    (b) The records of certification tests required by paragraph (a) above shall contain:
        (i) The gasoline tank truck tank serial number.
        (ii) The initial test pressure and the time of the reading.
        (iii) The final test pressure and the time of the reading.
        (iv) The initial test vacuum and the time of the reading.
        (v) The final test vacuum and the time of the reading.
        (vi) At the top of each report page, the company name and the date and location of the tests on that page.
        (vii) The name and title of the person conducting the test.
    (c) Copies of records and reports under this subsection shall be made available to the Department upon verbal or written request at any reasonable time. A copy of the test results for each gasoline tank shall be kept with the truck.
    (d) Gasoline tank trucks with a rated capacity of less than 4,800 gallons are exempt from paragraphs (a)-(c) above.

48. The Permittee shall keep records of tank truck vapor tightness documentation, monthly leak inspections, notifications, and replacements or additions of components on the vapor processing system as required by 40 CFR 60.505.

Notification Requirements

Tanks

49. The Permittee shall notify AMS in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (d) of Condition 16 to afford the AMS the opportunity to have an observer present. If the inspection required by paragraph (d) of Condition 16 is not planned and the Permittee could not have known about the inspection 30 days in advance or refilling the tank, the Permittee shall notify the AMS at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may

be made in writing and sent by express mail so that it is received by the AMS at least 7 days prior to the refilling. [40 CFR 60.113b (a)(5) - Assures Compliance with 40 CFR 63 Subpart BBBBBB]

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN
KINDER MORGAN POINT BREEZE TERMINAL - PHILADELPHIA, PA
GASOLINE TANK TRUCK LOADING RACK

I. Background

A. **Emissions Units Description**: Tank Truck Gasoline Loading Rack
Unit ID: LRACK
Facility: Kinder Morgan Point Breeze Terminal – Philadelphia, PA

B. **Applicable Regulations and Emission Limits:**

Applicable Regulation	VOC Limit
NESHAP Subpart BBBBBB Table 2 (1)(b) (VOC surrogate for HAP)	80 mg/l
025 Pa. Code § 129.59(a)	80 mg/l
Title V Permit Limit	10 mg/l

C. **Control Technologies**:

Control Device Designation	Control Type
VRU - Vapor Recovery Unit	Primary Carbon Adsorption System
VDU - Vapor Destruction Unit	Emergency Back-up Thermal Oxidizer

D. **Monitoring Requirements:**

Control Device Designation	Monitoring Requirements
VRU - Vapor Recovery Unit	Outlet VOC Concentration
VDU - Vapor Destruction Unit	Flame Detection; Minimum Operating Temperature

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II. Monitoring Approach

The key elements of the monitoring approach for the VRU the VDU are presented in Table's 1 and 2 below:

TABLE 1 – VRU MONITORING APPROACH

Item #	Designation	Description 1	Description 2
1	Indicator	Outlet VOC Concentration	Work practice
2	Measurement Approach	Continuous Emissions Monitoring System (CEMS)	Observation, inspection and maintenance of the VRU and CEMS per the manufacturer's specifications.
3	Indicator Range	An excursion is an exceedance of the allowable outlet concentration. The allowable outlet concentration is equivalent to 10 milligrams of VOC per liter of gasoline loaded.	An excursion is failure to maintain and inspect the VRU and CEMS per the manufacturer's specifications.
4	Verification of Operational Status	The outlet concentration is monitored continuously and recorded. In addition, the transfer of gasoline into tank trucks will cease immediately if the allowable outlet concentration is exceeded.	Not Applicable
5	QA/QC Practices	Follow QA/QC procedures as provided by the CEMS manufacturer. Daily calibrations, RATA, CGA, etc.	Not Applicable
6	Monitoring Frequency	Minimum of one cycle of operation (sampling, analyzing, and/or data recording) for each successive 15-minute period.	Per the manufacturer's specifications.
7	Data Collection Procedures	Recording of outlet VOC using a strip chart or data acquisition system.	Record results of inspections; repairs and maintenance activities.

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TABLE 2 – VDU MONITORING APPROACH			
Item #	**Designation**	**Description 1**	**Description 2**
1	Indicator	Presence of a pilot flame.	Work practice
2	Measurement Approach	Stack temperature is continuously monitored.	Observation, inspection and maintenance of the VDU per the manufacturer's specifications.
3	Indicator Range	An excursion is defined as processing gasoline vapor from tank trucks when the VDU operating temperature is less than 500°F. A transfer is not permitted to commence until achieving a temperature of 500°F. Any transfer in progress will be interrupted when a temperature less than 500°F is measured. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is failure to maintain and inspect the equipment per manufacturer's specifications.
4	Verification of Operational Status	The temperature is monitored continuously and recorded. In addition, the unit is equipped with a system interlock that will prevent or shutdown loading operations whenever the temperature is less than 500°F.	Not Applicable
5	QA/QC Practices	The owner or operator shall verify the accuracy of the temperature monitoring device at least once per calendar year.	Visually inspect the condition of the temperature monitoring device each month when the VDU is operated.
6	Monitoring Frequency	Minimum of one cycle of operation (sampling, analyzing, and/or data recording) for each successive 15-minute period	Not Applicable
7	Data Collection Procedures	Recording of temperature using a strip chart or data acquisition system.	Record results of inspections; repairs and maintenance activities.

III. Facility Description

This is a gasoline bulk terminal. The operations include storage tanks and product transfer via pipeline and tank trucks. The VRU and VDU are used to control VOC emissions (including HAP) generated during gasoline tank truck loading. The VRU is a carbon adsorption system. When the VRU is unavailable for any reason, the VDU is available as an alternative control device. The VDU is an enclosed combustor that utilizes thermal oxidation to destroy VOC emissions.

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IV. Rationale for Selection of Performance Indicators

The VRU indicator is VOC outlet concentration. The best means to quantify the effectiveness of any control device is to measure the outlet concentration of the targeted pollutant.

The combustor operating temperature was selected because initially, it verifies the presence of a flame, and secondly, it ensures adequate temperature to introduce gasoline vapor. As proven during stack performance testing, when the minimum temperature of the VDU is 500°F, the average VOC outlet concentration will be less than 10 milligrams per liter of gasoline loaded.

V. Rationale for Selection of Indicator Ranges

The selected indicator range for the VRU is mandated by permit. The outlet VOC concentration must be less than the equivalent of 10 milligrams per liter of gasoline loaded. This will monitored and recorded continuously and proven through stack performance testing.

The selected indicator range for the VDU was recommended by the manufacturer of the unit. The VDU must achieve an initial temperature of 500°F to ensure outlet emissions less than 10 milligrams per liter of gasoline loaded. The temperature is monitored and recorded continuously. The performance of the VDU has been proven through stack performance testing.