

Facility ID: 1483000170 Issuance type: Final State Permit To Operate

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 1483000170 Emissions Unit ID: J002 Issuance type: Final State Permit To Operate

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**Part II - Special Terms and Conditions**

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
  - (a) None.

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u>  | <u>Applicable Rules/Requirements</u>                                  | <u>Applicable Emissions Limitations/Control Measures</u>  |
|--|---|---|
| J002 - Four lane gasoline and fuel oil truck loading rack with Zink HEAA2500-825-11-10 Vapor Collection System (VCS) and Vapor Recovery Unit (VRU) | OAC rule 3745-31-05(A)(3) (PTI 14-04049)                              | <p>Volatile Organic Compound (VOC) emissions from the VRU stack shall not exceed 0.083 pound per 1000 gallons of gasoline loaded (10 mg/l) and 149.4 pounds per day.</p> <p>VOC emissions from the backup flare control device shall not exceed 0.292 pound per 1000 gallons of gasoline loaded (35 mg/l) and 525.4 pounds per day.</p> <p>Uncontrolled VOC emissions during distillate oil loading shall not exceed 0.014 pound per 1000 gallons of distillate oil loaded (1.68 mg/l) and 12.6 pounds per day.</p> <p>The requirements established pursuant to this rule also include compliance with the requirements established pursuant to OAC rules 3745-21-09(Q)(1)(a) through (d), OAC rule 3745-31-05(C), and 40 CFR 60 Subpart XX 60.502(a), (e) through (i).</p> |
|  | OAC rule 3745-31-05(C)  | See Section B.2.  |
|  | Synthetic Minor to Avoid Non-Attainment New Source Review and Title V | <p>Volatile Organic Compound (VOC) emissions shall not exceed 18.26 tons per year (TPY) from the VRU stack, based on a rolling, 12-month summation.</p> <p>Volatile Organic Compound (VOC) emissions shall not exceed 3.70 tons per year (TPY) from the backup flare control device, based on a rolling, 12-month summation.</p>  |
|  | OAC rule 3745-21-09(Q)(1)(b)(ii)                                      | See Section B.1.  |
|  | OAC rule 3745-21-09(Q)(1)(a) through (d), (2), and (3)                | The mass emissions limitation established pursuant to this rule is less stringent than the mass emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).   |
|  | 40 CFR 60 Subpart XX 60.502(b)  | See Sections B.3 through B.8.   |
|  | 40 CFR 60 Subpart XX 60.502(a), (e) through (i)                       | <p>The mass emissions limitation established pursuant to this rule is less stringent than the mass emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>See Sections B.9 through B.14.</p>  |

**2. Additional Terms and Conditions**

- (a) The short-term emission limitations specified in Section A are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limitations. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a carbon adsorption VRU as a primary control device and the use of a portable open flare as a backup control device and compliance with the rolling, 12-month throughput and emissions limitations. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**B. Operational Restrictions**

1. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summations of the throughput rates, upon issuance of this permit.
  - a. the maximum annual gasoline throughput rate for this emissions unit shall not exceed 440,000,000 gallons per year, based upon a rolling, 12-month summation of the gasoline throughput rates;
  - b. the maximum annual distillate oil throughput rate for this emissions unit shall not exceed 150,000,000 gallons per year, based upon a rolling, 12-month summation of the distillate oil throughput rates; and
  - c. the maximum annual gasoline throughput rate for this emissions unit when utilizing the backup flare control device shall not exceed 25,300,000 gallons per year, based upon a rolling, 12-month summation of the gasoline throughput rates during such time(s).
2. In order to demonstrate compliance with the allowable VOC emissions rate for the portable flare, the permittee shall maintain the gasoline loading rate between 600 gallons per minute and 8,400 gallons per minute when utilizing the flare, based on the manufacturer's guarantee.
3. The loading rack shall be equipped with a vapor collection system whereby during the transfer of gasoline to any delivery vessel:
  - a. all vapors displaced from the delivery vessel during loading are vented only to the vapor collection system; and
  - b. the pressure in the vapor collection system is maintained between minus 6 and plus 18 inches of water gauge pressure.
4. The loading rack shall be equipped with a vapor control system whereby:
  - a. all vapors collected by the vapor collection system are vented to the vapor control system; and
  - b. any liquid gasoline returned to a stationary storage tank from the vapor control system is free of entrained air to the extent possible with good engineering design.
5. The loading rack shall be provided with a means to prevent drainage of gasoline from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.
6. All gasoline loading lines and vapor lines shall be equipped with fittings which are vapor tight.
7. No owner or operator of a bulk gasoline terminal may permit gasoline to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.
8. The permittee shall repair any leak from the vapor collection system or vapor control system within 15 days of detection where the system is employed to meet the requirements of 40 CFR 60.502(j) and the sight, sound, or smell method was employed to detect the leak. The permittee shall also repair any leak from the vapor collection system or vapor control system within 15 days of detection where the system is employed to meet the requirements of paragraph (Q)(1) of OAC rule 3745-21-09 and when such leak is equal to or greater than 100 percent of the lower explosive limit as propane, as determined by the method outlined in paragraph (K) of OAC rule 3745-21-10.
9. Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.
10. Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks. The permittee has proposed the use of an alternate procedure for documenting vapor-tight gasoline tank trucks pursuant to the allowance in 40 CFR 60.502(e)(6). The alternate method consists of a computer recordkeeping system whereby gasoline tank trucks with out-of-date vapor-tightness records are prevented (locked out) from loading gasoline. The method was documented by the permittee and approved by Hamilton County Department of Environmental Services on May 9, 2006.
11. The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.
12. The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.
13. 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, 18 inches of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR 60.503(d).
14. 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, 18 inches of water).

15. The following VRU parameters have been identified as key operating parameters for which acceptable operating ranges have been established. The permittee shall operate the VRU within these acceptable operating ranges:
- to ensure proper regeneration of the carbon beds, the maximum vacuum pulled during the regeneration cycle shall be greater than or equal to 25 inches of mercury. The air purge solenoid shall also remain open during the regeneration cycle;
  - to ensure proper absorption by the absorption tower, the gasoline supply temperature shall not exceed 98 degrees Fahrenheit;
  - to ensure a proper flow rate from the absorption tower to the carbon bed, the absorber pressure shall be maintained between 17 psi and 23 psi; and
  - to ensure proper adsorption, the carbon bed temperatures, at all levels, shall not exceed 150 degrees Fahrenheit.

Operation of the VRU outside of these specified operating ranges is not necessarily indicative of an emissions violation, but rather serves as a trigger level for maintenance and/or repair activities, or further investigation to establish correct operation.

**C. Monitoring and/or Record Keeping Requirements**

- The permittee shall maintain monthly records of the following information:
  - the gasoline throughput rate, in gallons, for each month;
  - the distillate oil throughput rate, in gallons for each month;
  - the gasoline throughput rate when utilizing the backup flare control device, in gallons, for each month;
  - the updated rolling, 12-month summation of the gasoline and distillate oil throughput rates, in gallons;
  - the updated rolling, 12-month summation of the gasoline throughput rate when utilizing the backup flare control device, in gallons;
  - the updated rolling, 12-month summation of the actual VOC emissions from the VRU, in tons, for each month. This shall include the information for the current month and the preceding eleven months:
 

[[the actual gasoline throughput rate from C.1.d (gallons gasoline loaded/rolling, 12-month period) x emission factor (lbs of VOC/gallon gasoline loaded)] + [the actual distillate oil throughput rate from C.1.d (gallons distillate oil loaded/rolling, 12-month period) x emission factor (lbs of VOC/gallon distillate oil loaded)]] x 1 Ton/2000 lbs = Tons of VOC/rolling, 12-month period; and
  - the updated rolling, 12-month summation of the actual VOC emissions from the backup flare control device, in tons, for each month. This shall include the information for the current month and the preceding eleven months:
 

[the actual gasoline throughput rate when utilizing the backup flare control device from C.1.e (gallons gasoline loaded when utilizing the backup flare control device/rolling, 12-month period) x emission factor (lbs of VOC/gallon gasoline loaded when utilizing the backup flare control device)] x 1 Ton/2000 lbs = Tons of VOC/rolling, 12-month period.
- The permittee shall maintain daily records of the gasoline loading rate, in gallons per minute, when utilizing the backup flare control device.
- The permittee shall perform monthly monitoring of all potential sources of vapor leaks in the terminal's vapor collection system and vapor control system while a gasoline tank truck is being loaded. The permittee shall concurrently employ both the sight, sound, or smell method outlined in 40 CFR 60.502(j) and the leak detection method outlined in paragraph (K) of OAC rule 3745-21-10. The permittee shall record any leak detected with the sight, sound, or smell method and/or any VOC concentration which is equal to or greater than 100 percent of the lower explosive limit as propane as vapor leaks. The permittee shall maintain records of the results of the monthly leak checks, including at a minimum, the following information:
  - the date of inspection;
  - the findings of the inspection, which shall indicate the location, nature, and severity of the leak;
  - the leak detection method (sight, sound, or smell and/or portable gas analyzer);
  - the corrective action(s) taken to repair each leak and the date of final repair;
  - the reasons for any repair interval exceeding 15 calendar days (from the time of detection to the date of final repair) for each leak detected by sight, sound, or smell and/or any leak equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10; and
  - the inspector's name and signature.

These records shall be retained and accessible for a period of 5 years.
- The permittee shall maintain records, at the terminal, of the tank truck vapor tightness documentation required by Section B.10, in accordance with 40 CFR 60.505(a). The documentation file for each gasoline tank truck shall be updated at least once per year, in accordance with 40 CFR 60.505(b), to reflect current test results as determined by 40 CFR Part 60, Appendix A, Method 27.
- The permittee shall collect and record the following information each normal business day (Monday through Friday, excluding holidays) for the VCS/VRU:

- a. a log of the downtime for the VCS, VRU, and monitoring equipment, when the associated emissions unit was in operation;
  - b. during the regeneration cycle, the vacuum pressure, in inches of mercury;
  - c. the gasoline supply temperature, in degrees Fahrenheit;
  - d. the absorber pressure, in pounds per square inch; and
  - e. the carbon bed temperatures, in degrees Fahrenheit.
6. The permittee shall implement a preventive maintenance program for the Zink VRU which has been approved by the Hamilton County Department of Environmental Services. The program shall include an annual inspection of the VRU by a qualified individual trained in the operation and inspection of carbon adsorption-absorption systems. The resultant report shall be maintained on site and shall be made available during subsequent inspections by the Hamilton County Department of Environmental Services.
7. The permittee shall maintain the data required by the manufacturer's recommended daily operating guidelines on a daily basis. The permittee shall submit such a checklist to the Hamilton County Department of Environmental Services within 90 days of the issuance of this permit. Any subsequent changes to this checklist shall be mutually agreeable to the permittee and the Hamilton County Department of Environmental Services.

**D. Reporting Requirements**

1. Any leaks detected by the sight, sound, or smell method pursuant to 40 CFR 60.502(j) and/or any leaks in the vapor collection system or vapor control system equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10 of the Administrative Code, that are not repaired within 15 days after identification, shall be reported to the Hamilton County Department of Environmental Services within 30 days after the repair is completed. This report shall include the date the leak was detected and the date the leak was repaired.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services that identify all exceedances of the rolling 12-month gasoline and/or distillate oil throughput limitations outlined in Section B.1 and/or all exceedances of the rolling, 12-month VOC emissions limitations outlined in Section A.1.

The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively). If no deviations occurred during the reporting period, the permittee shall state so in the report.

**E. Testing Requirements**

1. Compliance with the applicable emissions limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:  
Emissions Limitation:
- Volatile Organic Compound (VOC) emissions from the VRU stack shall not exceed 0.083 pound per 1000 gallons of gasoline loaded (10 mg/l) and 149.4 pounds per day.
- Applicable Compliance Method:
- The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirements:
- i. the emissions testing shall be conducted within one year prior to the expiration of this permit, between the months of May through September. The Director (the appropriate local air agency or District Office) reserves the right to notify the permittee that a more frequent test schedule is required;
  - ii. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for VOCs, in the appropriate averaging period(s);
  - iii. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
    - a. for VOCs, Methods 21 and 25B of 40 CFR Part 60, Appendix A and the method outlined in 40 CFR Part 60.503 (d);
    - b. additionally, the VOC emission rates shall be determined in accordance with the methods and procedures contained in 40 CFR sections 60.503(b), (c), (e), and (f) of "Subpart XX - Standards of Performance for Bulk Gasoline Terminals", except that the gasoline throughput during any test shall not be less than ninety percent of the maximum throughput of the loading rack and not less than eighty thousand gallons;
    - c. alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA;

iv. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency;

v. during any test, all loading racks shall be open for each product line which is controlled by the system under test;

vi. simultaneous use of more than one loading rack shall occur to the extent that such use would normally occur;

vii. simultaneous use of more than one dispenser on each loading rack shall occur to the extent that such use would normally occur;

viii. dispensing rates shall be set at the maximum rate at which the equipment is typically operated;

ix. automatic product dispensers are to be used according to normal operating practices;

x. not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s);

xi. personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment; and

xii. a comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

Emissions Limitations:

VOC emissions from the backup flare control device shall not exceed 0.292 pound per 1000 gallons of gasoline loaded (35 mg/l) and 525.4 pound per day.

Uncontrolled VOC emissions during distillate oil loading shall not exceed 0.014 pound per 1000 gallons of distillate oil loaded (1.68 mg/l) and 12.6 pounds per day.

Applicable Compliance Method:

The VOC emissions limitation for the backup flare control device was developed from the information provided by the manufacturer and included in PTI Application 14-04049 submitted January 9, 1996. The VOC emission limitations for the distillate oil loading was developed from the uncontrolled VOC emission factor for Distillate Oil No.2 loading in AP-42, Fifth Edition, Transportation and Marketing of Petroleum Liquids, Table 5.2-5, 1/95.

If required, the permittee shall demonstrate compliance with the emissions limitations in accordance with the methods and procedures outlined in Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

Emissions Limitations:

18.26 TPY of VOC from the VRU stack, based on a rolling, 12-month summation.

3.70 TPY of VOC from the back flare control device based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitations shall be demonstrated by the record keeping requirements in Section C.1.

2. Compliance with the fuel throughput limitation in Section B.1 shall be demonstrated by the record keeping requirements of Section C.1.
3. Compliance with the operational parameters of the vapor collection and control system in Section B.15 shall be demonstrated by the record keeping requirements of Section C.5.
4. Compliance with the limitation in Section B.10 shall be demonstrated by the record keeping requirements of Section C.4.

**F. Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic pollutant will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that a new permit to install application would be required for an emissions unit if changes in the composition of the materials or use of new materials would cause the emissions of any pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices"), to increase to above 1.0 ton per year.
2. The following terms and conditions of this permit are federally enforceable: Sections A, B, C, D, and E.