

Facility ID: 1409080017 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: 1409080017 Emissions Unit ID: P902 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>
P902 - 250 TPH Drum Mix Asphalt Plant with Fabric Filter Baghouse	OAC rule 3745-31-05(A)(3) (PTI 14-04871)	Particulate emissions (PE) from the fabric filter stack shall not exceed 9.1 pounds per hour. Particulate matter emissions 10 microns and less in diameter (PM10) from the fabric filter stack shall not exceed 3.6 pounds per hour. PE/PM10 from fugitive emissions shall not exceed 6 pounds per hour and 5.5 tons per year (TPY). Volatile organic compound (VOC) emissions shall not exceed 15.3 pounds per hour. Sulfur dioxide (SO2) emissions from this emissions unit shall not exceed 1.5 pounds per hour. Nitrogen oxide (NOx) emissions from this emissions unit shall not exceed 9 pounds per hour. Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 102 pounds per hour. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1), OAC rule 3745-17-08(B), 40 CFR Part 60 Subpart I, and OAC rule 3745-31-05(C). Allowable emissions from the fabric filter stack shall not exceed the following based on rolling, 12-month summations: PE shall not exceed 8.3 tons per year. PM10 emissions shall not exceed 3.3 tons per year. VOC emissions shall not exceed 14 tons per year. SO2 emissions shall not exceed 1.4 tons per year. NOx emissions shall not exceed 8.3 tons per year. CO emissions shall not exceed 93.5 tons per year.
	OAC rule 3745-31-05(C)	

40 CFR Part 60, Subpart I	See Section B.2. Particulate emissions (PE) shall not exceed 0.04 grain of particulate/dry standard cubic foot (dscf) from the fabric filter stack. The visible particulate emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(A)(1)	See term and condition A.2.f. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust from any fugitive dust emissions point associated with this emissions unit shall not exceed 20 percent opacity, as a 3-minute average.
OAC rule 3745-17-08(B)	See terms and conditions A.2.c and A.2.d.
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- (a) Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% percent opacity, as a six-minute average. There shall be no visible emissions of fugitive dust from the enclosures for the hot aggregate elevator, vibrating screens, and weigh hopper. The drop height of the front end loader bucket shall be minimized to the extent possible in order to minimize or eliminate visible emissions of fugitive dust from the elevator loading area. The aggregate loaded into the storage bins shall have a moisture content sufficient to eliminate the visible emissions of fugitive dust from the elevator and the transfer point to the dryer. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, production limitations, and use of a fabric filter. 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. To ensure the fabric filter is operated according to the manufacturer's specifications and to maintain compliance with the allowable particulate emission rate, the pressure drop across the fabric filter shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.
- 2. The maximum annual asphalt production rate for this emissions unit shall not exceed 550,000 tons per year (TPY) based upon a rolling, 12-month summation of the production rate. The permittee has existing records to demonstrate compliance with the rolling, 12-month limitation upon issuance of this permit, therefore first year monthly production limitations are not necessary.
- 3. The permittee is allowed only to burn natural gas in this emissions unit. If other fuels are to be burned in this emissions unit, then the permittee shall submit notification and an air permit-to-install application, if applicable, to Hamilton County Department of Environmental Services before burning other fuels in this emissions unit.
- 4. The maximum hourly asphalt production rate for this emissions unit shall not exceed 250 tons per hour, unless the permittee demonstrates, to the satisfaction of the Hamilton County Department of Environmental Services, compliance with the emission limitations in this permit by stack testing at a higher production rate. In such case, the maximum hourly asphalt production rate for this emissions unit shall be the average rate of production during such stack test.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.
- 2. The permittee shall maintain hourly production records of the amount of asphalt produced by this emissions unit, in tons.
- 3. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the monthly asphalt production, in tons;
 - b. the rolling, 12-month summation of asphalt production calculated by adding the current month's asphalt production to the asphalt production for the preceding eleven calendar months; and
 - c. the updated rolling, 12-month summation emissions total, in tons, for NOx, CO, VOC, PE, PM10, and SO2 for this emissions unit (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months) calculated using the most recent stack test data and AP-42 emission factors identified in Section E.1 and the asphalt production, in tons, recorded pursuant to term and condition C.3.b above.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify each daily record in which the pressure drop across the fabric filter did not comply with the allowable range specified in Section B.1. The deviation report shall include a copy of such record.

If no deviations occurred during the reporting period, the permittee shall state so in the report. 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).
2. The permittee shall submit quarterly reports to the Hamilton County Department of Environmental Services which specify the asphalt production rate (in tons) for the previous calendar quarter. These reports shall include the rolling, 12-month summation of asphalt production rate for each calendar month ending in the reporting period.

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).
3. The permittee shall submit deviation (excursion) reports to the Hamilton County Department of Environmental Services that identify all exceedances of the hourly production rate limit in Section B.4.

If no deviations occurred during the reporting period, the permittee shall state so in the report. 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).
4. The permittee shall submit annual reports which specify the total PE, PM10, SO₂, NO_x, VOC and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. Testing Requirements

1. Compliance with the emissions limitations in Sections A.1 and A.2 shall be determined in accordance with the following methods:
Emission Limitations (Drum Dryer - Fabric Filter Stack):
PE shall not exceed 9.1 pounds per hour.
PE shall not exceed 0.04 grains of particulate/dscf.
PM10 emissions shall not exceed 3.6 pounds per hour.

Applicable Compliance Methods:
The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - i. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit renewal;
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable PE emission rates;
 - iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for PE emissions, 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 5. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA or Hamilton County Department of Environmental Services; and
 - 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 Ohio EPA or Hamilton County Department of Environmental Services.

v. 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 Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services' refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or Hamilton County Department of Environmental Services 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.

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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

vi. Compliance with the PM10 emissions limitation shall be demonstrated by compliance with the PE limitation and the following equation:

$E = PE \text{ rate, in pounds per hour} \times 30 \% \text{ (percentage of PE 10 microns in size or less per US-EPA AP-42, Table 11.1-4, dated 3/2004)}$.

Where E = emissions rate of PM10, in pounds per hour.

If required, the permittee shall demonstrate compliance with the PM10 emissions limitation through emission tests performed in accordance with 40 CFR Part 51, Appendix M, Method 201.

Emission Limitations:

VOC emissions shall not exceed 15.3 pounds per hour.
 SO₂ emissions shall not exceed 1.5 pounds per hour.
 NO_x emissions shall not exceed 9 pounds per hour.
 CO emissions shall not exceed 102 pounds per hour.

Applicable Compliance Methods:

Compliance with the emission limitations shall be demonstrated by applying the emission factors from AP-42, Fifth Edition, Tables 11.1-7 and 11.1-8, dated 3/2004, in the following equation for each pollutant:

Actual asphalt production rate (tons asphalt/hr) x AP-42 emissions factor (lb pollutant/ton asphalt) = lb pollutant/hr

Where:

VOC emission factor is 0.032 lb/ton;
 SO₂ emission factor is 0.0034 lb/ton;
 NO_x emission factor is 0.026 lb/ton; and
 CO emission factor is 0.13 lb/ton.

If required, the permittee shall determine compliance with the VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A. Methods 1 through 4 and 25 or 25a (as appropriate).

If required, the permittee shall determine compliance with the SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A. Methods 1 through 4 and 6C.

If required, the permittee shall determine compliance with the NO_x emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A. Methods 1 through 4 and 7 or 7a (as appropriate).

If required, the permittee shall determine compliance with the CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A. Methods 1 through 4 and 10.

Emission Limitations:

PE/PM₁₀ fugitive emissions shall not exceed 6.0 pounds per hour and 5.5 TPY.

Applicable Compliance Method:

Compliance with the fugitive emission limitations shall be demonstrated by applying the emission factors from AP-42, Fifth Edition, Table 11.1-14, 3/2004 in the following equations for each pollutant:

i. Actual asphalt production rate (tons asphalt/hr) x AP-42 emissions factor for drum mix load-out (lb pollutant/ton asphalt) + Actual asphalt production rate (tons asphalt/hr) x AP-42 emissions factor for silo filling (lb pollutant/ton asphalt) = lb pollutant/hr; and

ii. Actual asphalt production rate (tons asphalt/yr) x AP-42 emissions factor for drum mix load-out (lb pollutant/ton asphalt) x 1 ton/2000 lbs + Actual asphalt production rate (tons asphalt/yr) x AP-42 emissions factor for silo filling (lb pollutant/ton asphalt) x 1 ton/2000 lbs = TPY pollutant

Where:

Load-Out PE emissions factor is $0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$;

Silo Filling PE emissions factor is $0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$; and

V = site-specific asphalt volatility (percent loss-on-heating) or default value of -0.5

T = site-specific asphalt mix temperature, in degreesF, or default value of 325 degreesF.

Emission Limitations:

Allowable emissions from this emissions unit shall not exceed the following based on rolling, 12-month summations:

PE shall not exceed 8.3 TPY.

PM₁₀ emissions shall not exceed 3.3 TPY.

VOC emissions shall not exceed 14 TPY.

SO₂ emissions shall not exceed 1.4 TPY.

NO_x emissions shall not exceed 8.3 TPY.

CO emissions shall not exceed 93.5 TPY.

Applicable Compliance Method:

Compliance with the rolling, 12-month annual emissions limitations shall be demonstrated by the record keeping requirements in Section C.2 using the following equation:

Actual asphalt production (tons asphalt/year, rolling 12-month summation) x pollutant emissions factor (lb pollutant/ton asphalt) x 1 ton/2000 lbs = pollutant TPY, rolling 12-month summation

Where: the pollutant emissions factor is based on the most recent stack test for the pollutant (in lbs/hr) divided by the plant operating capacity (in tons/hour), or based on the AP-42 emissions factor for the pollutant as specified in E.1.b above.

Emission Limitations:

Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% percent opacity, as a six-minute average.

Visible particulate emissions from any fugitive dust emissions point associated with this emissions unit shall not exceed 20% percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60,

Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

2. Compliance with the asphalt production limitations in Sections B.2 and B.4 of these terms and conditions shall be demonstrated by the record keeping requirements in Section C.2.

F. **Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable: Section A through Section E.