

Facility ID: 1431072069 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: 1431072069 Emissions Unit ID: N002 Issuance type: Final State Permit To Operate

[Go to the top of this document](#)

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>
no. 2 multi-hearth incinerator w/scrubber (derated to 2.2 TPH of dry sludge)	OAC rule 3745-31-05(A)(3) (PTI 14-033)	Particulate emissions (PE) shall not exceed 1.30 lbs/ton of dry sludge or 2.83 lbs of PE/hr, and 12.4 tons of PE per year (TPY).
		The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart O; 40 CFR, Part 61, Subpart C; 40 CFR, Part 61, Subpart E; and OAC rule 3745-17-07(A).
	40 CFR, Part 60, Subpart O	The visible PE limitation and the pounds of PE per ton of dry sludge limitation specified by this rule are the same as the limitations established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR, Part 61, Subpart C	Beryllium (Be) emissions shall not exceed 10 grams of Be per 24-hour period.
	40 CFR, Part 61, Subpart E	Mercury (Hg) emissions shall not exceed 3200 grams of Hg per 24-hour period.
	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-09	The PE limitation specified by this rule is less stringent than the hourly PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - (a) None

B. Operational Restrictions

1. The average hourly feed rate of dry sludge shall not exceed 4350 pounds.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device. Where a combination of wet scrubbers is used in series, the pressure drop of the gas flow through the combined system shall be continuously monitored. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within plus or minus 250 pascals (plus or minus 1 inch water gauge) and shall be calibrated on at least an annual basis in accordance with the manufacturer's instructions.
2. The permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content of the incinerator exhaust gas. The oxygen monitor shall be located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of plus or minus 5 percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period.
3. The permittee shall install, calibrate, maintain and operate temperature measuring devices at every hearth in

- multiple hearth furnaces. A minimum of one thermocouple shall be installed in each hearth in the cooling and drying zones, and a minimum of two thermocouples shall be installed in each hearth in the combustion zone. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of plus or minus 5 percent over its operating range. Except as provided in paragraph (d) of 40 CFR, Part 60, Section 60.153, the temperature monitoring devices shall be operated continuously and data recorded during all periods of operation of the incinerator.
4. Except as provided in paragraph (d) of 40 CFR, Part 60, Section 60.153, the permittee shall collect and analyze a grab sample of the sludge fed to the incinerator once per day. The dry sludge content and the volatile solids content of the sample shall be determined in accordance with the method specified in Section 60.154(c)(2), except that the determination of volatile solids, step (3)(b) of the method, may not be deleted.
 5. The permittee shall maintain daily records of the following for this emissions unit:
 - a. the total amount of dry sludge charged, in pounds;
 - b. the hours of operation; and
 - c. the average hourly feed rate, in pounds of dry sludge, (a) divided by (b).
 6. The permittee shall retain the following records and make such records available for review by the Hamilton County Department of Environmental Services:
 - a. the measured pressure drops of the gas flow through the wet scrubber;
 - b. the measured oxygen contents of the incinerator exhaust gas; and
 - c. the rates of sludge charged to the incinerator, the measured temperatures of the incinerator, the fuel flow to the incinerator, and the total solids and volatile solids contents of the sludge charged to the incinerator.
 7. The permittee shall maintain a record of average oxygen content in the incinerator exhaust gas for each period of 1-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured for the same duration and during the most recent complying performance test by more than 3 percent.

D. Reporting Requirements

1. The permittee shall submit to the Hamilton County Department of Environmental Services semi-annual reports in writing which contain a record of average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than, by a percentage specified below, the average scrubber pressure drop measured over the same duration and during the most recent performance test that demonstrated compliance. The percent reduction in scrubber pressure drop for which a report is required shall be determined as follows according to the following equation:

$$P = -111E + 72.15$$
 where P = percent reduction in pressure drop; and
 E = average particulate emissions (lbs/ton of dry sludge).

These reports shall be submitted by February 15 and August 15 of each year and shall cover the previous six calendar months (January - June and July - December).
2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any daily record showing any exceedance of the average hourly dry sludge throughput limitation. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
3. The permittee shall submit to the Hamilton County Department of Environmental Services an annual report that contains the results of the sludge sampling for mercury. This report shall be submitted by February 15 of each year for the preceding calendar year.

E. Testing Requirements

1. Compliance with the emission and operational limitations in Sections A and B of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:
 Visible PE shall not exceed 20 percent opacity, as a 6-minute average, except as specified by rule.

Applicable Compliance Method:
 Compliance with the visible PE limitation shall be determined using the method specified in OAC rule 3745-17-03(B)(1).

Emission Limitation:
 1.30 lbs of PE/ton of dry sludge or 2.83 lbs of PE/hr and 12.4 TPY of PE

Applicable Compliance Method:
 Compliance with the hourly emission limitation above shall be determined by emission testing conducted in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760 hours per year and then dividing by 2000 lbs per ton).

Operational Limitation:
 average hourly feed rate of dry sludge shall not exceed 4350 pounds

Applicable Compliance Method:
 Compliance with the hourly feed rate limitation for this emissions unit as identified in section B.1 shall be based on the record keeping requirements in section C.6 of this permit.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the

following requirements:

- a. The emission testing shall be conducted 2.5 years after the issuance of this permit and within 6 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the PE limitation of 1.3 lbs of PE/ton of dry sludge or 2.83 lbs of PE/hr.
- c. The following test method shall be employed to demonstrate compliance with the PE limitation:

Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

- d. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Hamilton County Department of Environmental Services' refusal to accept the results of the emission test.

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test, 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 shall be signed by the person or persons responsible for the test and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

3. Compliance with the mercury and beryllium emission limitations shall be demonstrated by annual sludge sampling using Method 105 of Appendix B and paragraph 61.54 of 40 CFR, Part 61.

F. Miscellaneous Requirements

1. None