Facility ID: 1652010052 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

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.

Facility ID: 1652010052 Emissions Unit ID: N001 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
N001 (ISI-H2 Crematory) natural gas-fired, controlled air, multiple chamber incinerator (primary chamber burner heat input 1.6 mmBtu/hr and secondary chamber burner heat input 1.2 mmBtu/hr), 180 lbs/hr maximum rated batch charging capacity, burning Types 0 & 4 waste	OAC rule 3745-31-05 (A)(3) (PTI 16-02236)	1% opacity from any stack, as a 6-minute average (except during startup) 0.68 lb/hr & 3.0 tpy nitrogen oxides See Sections A.2 and B.1 through B.4 of these special terms and conditions for additional requirements of OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-09 (B)	0.10 lb particulates/100 lbs waste charged
	OAC rule 3745-17-07 (A)	The visible particulate emissions limit under OAC rule 3745-17-07 is less stringent than the visible particulate emissions limit established pursuant to OAC rule 3745-31-05 (A)(3).

2. **Additional Terms and Conditions**

   (a) The permittee shall install, adjust, operate, and maintain the emissions unit covered under this permit in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
   Based upon application data, the above nitrogen oxides and particulates emissions limits are greater than the potential to emit for this emissions unit. Therefore, no emissions record keeping or reporting are required to demonstrate compliance with these emissions limits.

   However, if any proposed change(s), such as with equipment design, capacity, and/or configuration, or operational procedures, or anything else that increase(s) the potential to emit any air pollutant, then the permittee shall apply for and obtain either a modification to the permit to install or a new final permit to install prior to the change(s).

B. **Operational Restrictions**

1. The permittee shall employ only natural gas as fuel in this emissions unit.

2. The permittee shall only burn Type 4 (human remains) and associated Type 0 (paper/wood products) waste in this emissions unit. The paper products must be free from all plastics and all other foreign materials, and the wood products must not be preservative-treated wood and also must not contain any foreign materials. No plastic bags or other types of plastic materials shall be burned.

3. The batch incinerator (fully loaded while cold and never opened until the burn cycle is complete) shall incorporate a lockout system, which will prevent the ignition of waste until the exhaust gas temperature of the secondary combustion chamber reaches 1400 degrees Fahrenheit.

4. The secondary combustion chamber shall be maintained at a minimum exhaust gas temperature of 1400 degrees Fahrenheit until the wastes are completely combusted and the burn-down cycle is complete.

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

1. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the secondary combustion chamber when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be

installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

2. The permittee shall collect and record the following information each day:

a. A log of the downtime for the temperature monitoring and/or recording equipment, when the associated emissions unit was in operation; and

b. All periods of time during which the temperature of the exhaust gases from the incinerator, when the emissions unit was in operation, was below the minimum secondary combustion chamber exhaust gas temperature of 1400 degrees Fahrenheit as specified above.

D. **Reporting Requirements**

1. The permittee shall submit temperature deviation (excursion) reports that identify all periods of time (except momentary excursions) during which the temperature of the exhaust gases from the secondary combustion chamber does not comply with the temperature limitation specified above.

2. The deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

E. **Testing Requirements**

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
Emission Limitation: 0.10 lb particulates/100 lbs waste charged

Applicable Compliance Method: The above emissions limit is greater than the potential to emit, as determined from manufacturer's stack test data
Emission Limitation: 1% opacity as a 6-minute average, except during startup

Applicable Compliance Method: USEPA Method 9, 40 CFR Part 60, Appendix A.
Emission Limitations: 0.68 lb/hr & 3.0 tpy nitrogen oxides

Applicable Compliance Method: Based on industry emissions data, the above emissions limits are greater than the potential to emit, as demonstrated in the equations below:

H = (Eb)B + (Ef)F;
Y = H(8760 hours/year)(1 ton/2000 pounds).

Where,

H = 0.55 pounds/hour of nitrogen oxides [hourly potential to emit];
Y = 2.4 tons/year of nitrogen oxides [yearly potential to emit];
Eb = 3 pounds of nitrogen oxides/2000 pounds of waste charged [industry emissions data];
B = 180 pounds/hour of waste charged [maximum rated capacity];
Ef = 100 pounds of nitrogen oxides/1000 million Btu [AP-42, Table 1.4-1, 7/98]; and
F = 2.8 million Btu/hour heat input [maximum rated capacity].

[Note: the 0.68 lb/hr of nitrogen oxides emissions limit is based on emissions data obtained from tests conducted on the Industrial Equipment & Engineering Company cremator unit, Ener-Tek.]

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 compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees 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 changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.