

Permit Number: [Permit Number]
Facility Name: [Facility Name]
Facility ID: [Facility ID]

GENERAL PERMIT 23.1 TEMPLATE

**HUMAN CREMATORIES WITH A RATED CAPACITY OF GREATER THAN OR EQUAL TO 100 LBS/HR, BUT LESS THAN
OR EQUAL TO 200 LBS/HR**

B. Facility-Wide Terms and Conditions

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

C. Emissions Unit Terms and Conditions

1. [Emissions Unit ID], [Company Equipment ID]

Operations, Property and/or Equipment Description:

Human crematory with a rated capacity of greater than or equal to 100 pounds per hour, but equal to or less than 200 pounds per hour

a) 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.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving the cremation unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-09(B)	Particulate emissions shall not exceed 0.10 pound per 100 pounds of material charged.
c.	OAC rule 3745-17-09(C)	See b)(2)a. below.
d.	OAC rule 3745-18-06(E)	See b)(2)b. below.
e.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c. below.

(2) Additional Terms and Conditions

a. Cremation units, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

b. This cremation unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C), because the process weight rate [as defined in OAC rule 3745-18-01(B)(14)] is less than or equal to 1,000 lbs/hr.

- c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the carbon monoxide (CO), nitrogen oxides (NO_x), particulate emissions (PE), sulfur dioxide (SO₂), and volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons/year.

c) Operational Restrictions

- (1) The permittee shall only fire the cremation unit using natural gas, propane or butane.
- (2) The cremation unit shall meet the following design characteristics:
 - a. includes primary and secondary combustion chambers or primary combustion chamber and afterburner;
 - b. the secondary chamber or afterburner operates at a minimum temperature of at least the manufacturer's recommended temperature or 1,600 degrees Fahrenheit absent a manufacturer's recommended temperature;
 - c. the secondary chamber has a gas retention time of at least a 1.0-second;
 - d. includes secondary chamber (afterburner) temperature monitoring and recording equipment;
 - e. has a vertical exhaust stack at least four feet higher than the tallest portion of the building;
 - f. has an exhaust stack free of obstructions to the vertical flow of the exhaust gases e.g., no horizontal stacks or rain caps that direct the exhaust towards the ground;
 - g. has an exhaust gas temperature of at least 750 degrees Fahrenheit; and
 - h. has an exhaust gas flowrate of at least 1,200 actual cubic feet per minute.
- (3) The permittee shall not operate the cremation unit unless the temperature monitoring and recording devices are operating properly.
- (4) The permittee shall install, operate, and maintain the cremation unit in accordance with the manufacturer's specifications.
- (5) Prior to operating the cremation unit, the operator shall complete operation training that follows the minimum recommended elements from the cremation unit's manufacturer.
- (6) The permittee shall not use the cremation unit to incinerate any "medical/infectious waste" as defined in 40 CFR Part 62, Subpart HHH.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall install, operate, and properly maintain temperature monitoring and recording devices which continuously monitor and record the secondary combustion chamber or afterburner temperatures whenever the cremation unit is in operation.
- (2) The permittee shall maintain daily records of the following information for the cremation unit:

- a. a log of the days when the cremation unit was in operation;
 - b. for each cremation, record all periods of time during which the temperature of the afterburner dropped below the manufacturer's recommended temperature or 1,600 degrees Fahrenheit absent a manufacturer's recommended temperature (except for times when the primary chamber is open for loading); and
 - c. for each day during which the permittee fires the cremation unit with a fuel other than natural gas, propane or butane, the permittee shall maintain a record of the type and quantity of fuel fired in this emissions unit.
- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the cremation unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under d)(3)d above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the cremation unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, specify the minor corrective actions that were taken to ensure that the cremation unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (4) The permittee shall perform weekly checks, when the cremation unit is in operation for any objectionable odors. The presence or absence of any objectionable odors shall be noted in the operations log.

For these weekly checks, objectionable odors are present if offensive odors are detectable outside the permittee's property where the cremation unit is being operated. If objectionable odors are present, the permittee shall note the corrective actions that were taken to eliminate the objectionable odors in the operations log.

- (5) The permittee shall inspect this cremation unit according to the preventive maintenance procedures recommended by the equipment manufacturer. The inspection shall be done at least semi-annually (or more often if recommended by the equipment manufacturer). Each inspection shall include a written log which documents the findings of the inspection and identifies any needed cleaning of or repairs to the cremation unit. If cleaning or repairs

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are needed, the cremation unit shall not be operated if the operation would result in any exceedance of the emission limits detailed in this permit.

- (6) The permittee shall maintain records of the date and description of all repairs and maintenance. These records shall include copies of invoices of maintenance and repairs. These records shall be maintained on site for a period of no less than five years.
- (7) The permittee shall maintain operator training records, for the training required in term c)(5), that include, at a minimum, the date trained, the operator name and the elements covered during the training.

A copy of all training records for each operator shall be maintained on file for as long as that operator is employed for that job and shall be made available to the appropriate Ohio EPA district office or local air agency upon request.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate Ohio EPA district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA district office or local air agency by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements in terms d)(2) through d)(4) above:
 - a. all days during which any visible particulate emissions were observed from the crematory stack and any corrective actions taken to minimize or eliminate the visible particulate emissions;
 - b. all days during which objectionable odors were detected during the operation of the cremation unit and the corrective actions that were taken to eliminate the objectionable odors;
 - c. the day(s) and time(s) during which the secondary combustion chamber or afterburner temperature dropped below the manufacturer's recommended temperature or 1,600 degrees Fahrenheit absent a manufacturer's recommended temperature, during operation of the cremation unit (except for times when the charge is actively being loaded into the cremation unit) and the corrective actions that were taken to reestablish the proper operating temperature; and
 - d. each day during which the cremation unit was fired with a fuel other than natural gas, propane or butane.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

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Visible particulate emissions from the exhaust stack serving the cremation unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.

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.

b. Emission Limitation:

Particulate emissions shall not exceed 0.10 pound per 100 pounds of material charged.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 and OAC rule 3745-17-03(B)(8).

g) Miscellaneous Requirements

(1) None.