



## **Human Crematories**

### **Informational Handout**

#### ❖ **What is the Purpose of the Air General Permit Registration Program?**

- The Department of Environmental Protection (DEP) has established an Air General Permit (AGP) under Rule 62-210.310(5)(c), Florida Administrative Code, (F.A.C.), for Human Crematories. By simply registering to “use” the AGP, the owner or operator of an eligible facility is allowed to construct and operate the facility under the terms and conditions of the AGP rule. There is no need for the owner or operator to incur the additional time and expense of applying for an individual air construction or air operation permit.

#### ❖ **Who is Eligible to use a Human Crematory AGP?**

- Eligible facilities must contain no other emission units other than human and animal crematories that require an AG permit. The owner/operator or authorized representative may use a human crematory AG permit and an animal crematory AG permit at the same facility provided all human crematory units operate under a single human crematory AG permit and all animal crematory units operate under a single animal crematory permit.
- Eligible facilities must not emit ten (10) tons per year or more of any listed hazardous air pollutant (HAP), twenty-five (25) tons per year or more of any combination of HAPs, or 100 tons per year or more of any other regulated air pollutant.
- Existing facilities with an AO permit may renew that permit or apply for the AG permit at least thirty (30) days prior to the expiration date of the existing permit.

#### ❖ **How Do I Register or Re-register for a Human Crematory AGP?**

- To register, the owner/operator of an existing or new human crematory may:
  - Use the Department’s online Air General Permit Electronic Registration System (AGPERS) found at:

<http://www.dep.state.fl.us/air/permitting-compliance/content/air-general-permits>; or

- Download and complete the human crematory registration worksheet found at the web page below and mail it to the Department at the address indicated in the worksheet instructions along with a \$100 registration processing fee.

<http://www.dep.state.fl.us/air/permitting-compliance/content/human-crematories>

- The registration and associated processing fee must be submitted to the Department at least thirty (30) days prior to the expiration date of an existing facility's authorization.
- For a new facility, the registration must be submitted at least thirty (30) days before intending to use the AGP rule authority.
- If certain changes occur at an existing human crematory facility, the owner/operator must re-register for use of the AGP. Re-registration of the AGP is required for the following changes:
  - Change of ownership
    - The new owner/operator must submit a registration along with a fee of \$100.00, at least thirty (30) days before intending to use the AGP rule authority.
    - The current owner operator is encouraged to notify the Department prior to the sale of the facility.
  - Physical change in location
  - Proposed new construction
  - Modifications to equipment (installation of new process or air pollution equipment; alteration of existing process or control equipment; or replacement of existing process or control equipment with equipment substantially different in terms of capacity, method of operation, material processed, or intended use than that noted in the most recent registration form)

### ❖ **What is required by the Human Crematory AGP Rule?**

#### **☑ General Requirements**

- Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas corrected to 7% oxygen.
- Carbon monoxide emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% oxygen on an hourly average basis.
- Visible emissions are limited to 5% opacity, six-minute average, with an exception for visible emissions not exceeding 15% opacity for up to six minutes in any one-hour period.

- Human crematories shall cremate only human or fetal remains with appropriate containers. The remains may be clothed.
- Human crematories shall only cremate with containers having no more than 0.5%, by weight, chlorinated plastics which should be demonstrated by the manufacturer's data sheet. If containers are incinerated, documentation from the manufacturer certifying that they meet this requirement must be kept on file while in use and for at least two (2) years after their use.
- No other material, including biomedical waste shall be incinerated.
- This AG permit is valid only for the specific activity indicated. Any deviation from the specified activity and the conditions for undertaking that activity shall constitute a violation of the permit.
- A facility must not emit objectionable odors.

#### **☑ Initial Compliance Demonstration and Testing**

- The facility shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation and **once every calendar year thereafter**.
- The owner/operator or authorized representative of any human crematory shall not be required to have performance tests for **carbon monoxide** or **particulate matter**, except when the Department, after investigation has good reason to require a special compliance test pursuant to Rule 62-297.310(5)(c), F.A.C.

#### **☑ Test Methods and Procedures**

All emissions tests performed shall comply with the following requirements:

1. The reference test method for visible emissions shall be EPA Method 9.
2. The reference test method for carbon monoxide shall be EPA Method 10.
3. The reference test method for oxygen shall be EPA Method 3.
4. The reference test method for particulate emissions shall be EPA Method 5. The minimum sample shall be 30 dscf.
5. Operation During Compliance Test. Testing of emissions shall be conducted with the source operating at the manufacturer's recommended capacity. Testing of emissions shall be conducted with the unit operating at a capacity one (1) adult-sized cadaver.

## **☑ Operating Requirements**

**Operating requirements for crematory units depend upon the date of original construction.**

Crematory units for which a complete application to construct a new unit was received by the Department prior to August 30, 1989, the following operating parameters apply:

- Maintain the actual operating temperature of the secondary chamber combustion zone at no less than **1400°F** throughout the combustion process in the primary chamber; and
- Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than **1400° F**.

Operating requirements for crematory units for which a complete application to construct a new unit or a new registration was received by the Department on or after August 30, 1989 the following parameters apply:

- Human crematory units shall have design calculations to confirm sufficient volume in the secondary chamber combustion zone to provide at least a 1.0 second gas residence time at **1800° F**. This information must be provided to the Department with the AG permit registration worksheet for the proposed new unit;
- The actual operating temperature of the secondary chamber combustion zone shall be no less than **1600° F** throughout the combustion process in the primary chamber; and
- Cremation in the primary chamber and stack volumes shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than **1600° F**.

## **☑ Continuous Monitoring Requirements**

- Each crematory unit must be equipped and operated with a continuous monitor to record temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone according to the manufacturer's instructions.
- Each crematory unit installed after **February 1, 2007**, must be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement. The pollutant monitoring system shall be calibrated to restrict combustion in the primary chamber whenever any opacity exceeding 15 percent is occurring.
  - A complete file of all temperature measurements, all continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or

monitoring device calibration checks; and all adjustments, preventive maintenance, and corrective maintenance performed on these systems or devices, shall be recorded in a permanent legible form available for inspection.

- Continuous temperature monitoring documentation shall include operator name, operator indication of when cremation in the primary chamber begun, date, time, and temperature markings.

- Pollutant monitoring system documentation shall include indication of when the opacity measurement system was cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule. The file shall be retained for at least two (2) years.

### **☑ Record-keeping**

The owner/operator or authorized representative of the unit shall maintain records for:

- Particulate matter and carbon monoxide compliance demonstration – life of the equipment
- Visible emissions compliance demonstration – life of the equipment
- Continuous monitoring data - two (2) years
- Crematory container composition - two (2) years
- Repair records on all crematory units - two (2) years

### **☑ Equipment Maintenance**

- All human crematory units shall be maintained in proper working order in accordance with the manufacturer's specifications to ensure the integrity and efficiency of the equipment.
- If a crematory unit contains a defect that affects the integrity or efficiency of the unit, the unit shall be taken out of service. The unit shall not be permitted until it has been repaired or adjusted.
- Repair records on all crematory units shall be maintained onsite for at least 2 years.
- A written plan containing operating procedures for startup, shutdown and malfunction shall be maintained and followed during those events.
- Each unit's burners shall be operated with the proper air-to-fuel ration. The burner's flame characteristics shall be checked visually at least once during each operating shift and adjusted if necessary.

❖ **Who do I contact regarding questions about AGPs and/or registration procedures?**

- Please contact the Department's Small Business Environmental Assistance Program by phone at 1-800-722-7457 or by email at [Small.Business@dep.state.fl.us](mailto:Small.Business@dep.state.fl.us).

*DISCLAIMER: This handout is for guidance purposes only. It is not official rule language and does not include a comprehensive listing of all environmental regulations that may be applicable to Human Crematories. Please refer to Rule 62-210.310(5)(c) for complete and up-to-date rule language.*