



4/8/2015

Franklin Gadd
Butterbridge Farms Pet Cemetery
639 First Street NE
Massillon, OH 44646

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1576045001
Permit Number: P0118509
Permit Type: Initial Installation
County: Stark

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Canton City Health Department at (330)489-3385 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Canton



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Butterbridge Farms Pet Cemetery**

Facility ID:	1576045001
Permit Number:	P0118509
Permit Type:	Initial Installation
Issued:	4/8/2015
Effective:	4/8/2015
Expiration:	2/28/2023



Division of Air Pollution Control
Permit-to-Install and Operate
for
Butterbridge Farms Pet Cemetery

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. N002, Pet Retort No. 1.....	11



Final Permit-to-Install and Operate
Butterbridge Farms Pet Cemetery
Permit Number: P0118509
Facility ID: 1576045001
Effective Date: 4/8/2015

Authorization

Facility ID: 1576045001
Application Number(s): A0052886
Permit Number: P0118509
Permit Description: Initial installation of a 75 lb/hr natural gas-fired, controlled-air, two-stage cremation unit intended for pet cremations; Therm-Tec Model S-27-G-F, with a 0.8 mmBtu/hr primary combustion chamber burner and a 0.8 mmBtu/hr secondary combustion chamber burner.
Permit Type: Initial Installation
Permit Fee: \$100.00
Issue Date: 4/8/2015
Effective Date: 4/8/2015
Expiration Date: 2/28/2023
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

Butterbridge Farms Pet Cemetery
5542 Butterbridge Rd NW
Canal Fulton, OH 44614

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install and Operate
Butterbridge Farms Pet Cemetery
Permit Number: P0118509
Facility ID: 1576045001
Effective Date: 4/8/2015

Authorization (continued)

Permit Number: P0118509

Permit Description: Initial installation of a 75 lb/hr natural gas-fired, controlled-air, two-stage cremation unit intended for pet cremations; Therm-Tec Model S-27-G-F, with a 0.8 mmBtu/hr primary combustion chamber burner and a 0.8 mmBtu/hr secondary combustion chamber burner.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	N002
Company Equipment ID:	Pet Retort No. 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Butterbridge Farms Pet Cemetery
Permit Number: P0118509
Facility ID: 1576045001
Effective Date: 4/8/2015

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate
Butterbridge Farms Pet Cemetery
Permit Number: P0118509
Facility ID: 1576045001
Effective Date: 4/8/2015

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Butterbridge Farms Pet Cemetery

Permit Number: P0118509

Facility ID: 1576045001

Effective Date: 4/8/2015

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.



Final Permit-to-Install and Operate
Butterbridge Farms Pet Cemetery
Permit Number: P0118509
Facility ID: 1576045001
Effective Date: 4/8/2015

C. Emissions Unit Terms and Conditions



1. N002, Pet Retort No. 1

Operations, Property and/or Equipment Description:

75 lb/hr natural gas-fired, controlled-air, two-stage cremation unit intended for pet cremations; Therm-Tec Model S-27-G-F, with a 0.8 mmBtu/hr primary combustion chamber burner and a 0.8 mmBtu/hr secondary combustion chamber burner.

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. b)(1)b. and g)(1)

(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 operations(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. 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 3745-31-05(A)(3) June 30, 2008 [Best Available Technology (BAT)]	<p>The crematory incinerator shall be designed to meet 0.20 pounds of PE/PM₁₀ per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.033 tons per month averaged over a twelve month rolling period.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.102 tons per month averaged over a twelve month rolling period.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.03 tons per month averaged over a twelve month rolling period.</p> <p>Volatile organic compound (VOC)</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions shall not exceed 0.022 tons per month averaged over a twelve month rolling period. See b)(2)a., b)(2)b. and b)(2)c. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008 [less than 10 tpy BAT exemption]	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE/PM ₁₀ , SO ₂ , NO _x , CO and VOC emissions from this air contaminant source, since the uncontrolled potential to emit for each of these pollutants is less than ten tons per year. For PE/PM ₁₀ , <10 tpy PTE also takes into account the federally enforceable limitation of 0.20 lb PE per 100 lb of material charged (see b)(1)d. below). See b)(2)d. below.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-09(B) [as applied for <100 lb/hr charge rate]	Particulate emissions* shall not exceed 0.20 pounds per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged. See b)(2)a. * For the purpose of this permit, particulate emissions shall mean filterable particulate emissions, (PE/PM) _{FILT.}
e.	OAC rule 3745-17-09(C)	See b)(2)a and b)(2)e.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05 include compliance with the following. Additionally, the following is also required to ensure compliance with OAC rule 3745-17-09(B) and (C):
 - i. compliance with Operational Restrictions c)(1) – c)(8) below.
- b. The emissions limitations for PE/PM₁₀, SO₂, NO_x, CO, and VOC are based on the emission unit's potential to emit. Therefore, no monitoring, record keeping,



and reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.

- c. The Best Available Technology (BAT) requirements in b)(1)a. above apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- d. The exemptions described in b)(1)b. above apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- e. This cremation unit and all associated equipment and grounds shall be designed, operated, and maintained so as to prevent the emission of objectionable odors. Compliance with OAC rule 3745-17-09(C) shall also be demonstrated as follows:
 - i. The stack shall be designed to minimize any building downwash impacts from emissions and/or odors on employees and nearby residences, businesses, or public or private spaces. The design shall meet good engineering practices so as not to result in excessive concentrations of air contaminants and/or odors in locations at, near, or in such a configuration, as to affect any air intake for heating and cooling of buildings or at operable windows or doors.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in the burners of this cremation unit.
- (2) The actual burn time used to complete each cremation shall be based on the estimated charge weight and the manufacturer's recommendation for that weight.
- (3) The permittee shall install, operate, and properly maintain temperature gauges that continuously monitor the temperatures of the primary chamber exit gas and the secondary chamber exit gas in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (4) The permittee shall install, operate, and maintain this cremation unit in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee. This includes but is not limited to:
 - a. at the start of each cremation, the secondary chamber exit gas must reach the minimum temperature recommended by the manufacturer before ignition of the primary burner;
 - b. after ignition of the primary burner, the secondary chamber exit gas shall be maintained at or above the minimum temperature recommended by the manufacturer during the "burn" portion of a cremation cycle; and



- c. during the “burn” portion of a cremation cycle, the primary chamber exit gas shall be maintained at or above the minimum temperature recommended by the manufacturer.
 - (5) The permittee shall assure that a manufacturer’s representative or other qualified training source provides adequate instruction to all operators of this cremation unit, including hands-on control of the unit for at least two operating cycles. The training shall include all of the following elements:
 - a. principles of combustion;
 - b. operating monitors and controls;
 - c. the proper operating sequence under normal conditions;
 - d. safety and operating procedures under foreseeable upset conditions (e.g., power or fuel interruption, burner malfunction, visible emissions, high and low temperature incidents, etc.);
 - e. regulatory requirements;
 - f. calibration, adjustment, and replacement of thermocouples;
 - g. preventive maintenance practices, procedures, and recommended frequencies; and
 - h. recordkeeping requirements and procedures.

A copy of all the training records for each operator shall be maintained on file as long as that operator is employed for that job and shall be made available to the Canton City Health Department, Air Pollution Control Division upon request.
 - (6) Ashes shall be removed from the primary chamber daily at minimum.
 - (7) To the extent possible, non-combustible material (except for personal items requested to be included by the family) shall be removed from the material charged to this cremation unit.
 - (8) This cremation unit shall not be used to dispose of any “medical or infectious waste” as defined in OAC rule 3745-75-01.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall perform daily checks*, when the cremation unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this 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 observed visible emission 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 item (d) above or continue the daily 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, or 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.

* In lieu of daily visible emissions checks, the permittee may install an opacity alarm system on this cremation unit, provided the alarm is set to signal the operator at an opacity level of 20% or less. The opacity alarm shall be installed, operated and maintained in accordance with the manufacturer's specifications and a daily operations log shall be maintained that is consistent with requirements a. – e. above.

- (2) The permittee shall maintain daily records of the following information for this cremation unit:
 - a. a log of the time and date that ash is removed from this cremation unit.
- (3) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Canton City Health Department, Air Pollution Control Division upon request.
- (4) The permittee shall maintain records that document any time periods during which the cremation unit and/or temperature gauges were not operated according to the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (5) The permittee shall conduct periodic inspections of this cremation unit and temperature gauges and perform preventive maintenance according to the procedures and frequency recommended by the equipment manufacturer, with any documented modifications deemed necessary by the permittee. The permittee shall document each inspection, preventive maintenance procedure, and any repairs performed on this cremation unit, and shall maintain the following information:



- a. the date of the inspection, preventive maintenance, or repair procedure;
 - b. a description the findings of the inspection, preventive maintenance performed, or repairs performed; and
 - c. the name(s) of the person(s) who performed the inspection, preventive maintenance, or repair procedure.
- (6) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this cremation unit.
- e) Reporting Requirements
- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Canton City Health Department, Air Pollution Control Division by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered. The permittee shall also identify the following information in the annual permit evaluation:
 - a. all periods of time during which a fuel other than natural gas was burned in this cremation unit;
 - b. any time periods during which the cremation unit and/or temperature gauges were not operated according to the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee; and
 - c. all days during which any visible particulate emissions were observed from the stack serving this cremation unit, and any corrective actions that were taken.
- 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. Emissions Limitation:

Particulate emissions* shall not exceed 0.20 pound per 100 pounds of liquid, semi-solid or solid refuse and salvageable material charged.

* For the purpose of this permit, particulate emissions shall mean filterable particulate emissions, $(PE/PM)_{FILT}$, in order to allow compliance to be demonstrated by Federal Reference Method 5 (if required).



Applicable Compliance Method:

The maximum hourly rate for particulate emissions (PE) was determined to be 0.10 lb/hr based upon the results of five separate stack tests that were reviewed by the permit writer. All of the stack tests were conducted during actual cremations. One of the five sets of stack test data was provided by the manufacturer of the subject cremation unit and was submitted with the permit application. Three of the five sets of data were provided by other manufacturers of similar cremation units, and were received at Canton City Health Department in the applications for permit No.'s 15-01673, P0112301, and P0112481. The fifth set of stack test data was incorporated into the emission factors published in WebFIRE for SCC No. 3-15-021-01.

This maximum hourly emissions rate of 0.10 lb_{PE}/hr was compared to the rule-based limit of 0.20 lb per 100 pounds of material charged as applied to the maximum charge rate of 75 lb/hr for this cremation unit:

$$(0.20 \text{ lb}_{PE}/100 \text{ lb}_{CHARGE}) \times (75 \text{ lb}_{CHARGE}/\text{hr}) = 0.15 \text{ lb}_{PE}/\text{hr}$$

0.15 lb_{PE}/hr is therefore the *APPLIED RULE-BASED LIMIT*

$$0.10 \text{ lb}_{PE}/\text{hr}_{ESTIMATED MAX.} < 0.15 \text{ lb}_{PE}/\text{hr}_{APPLIED RULE-BASED LIMIT}$$

Comment: the above demonstration of compliance based on potential-to-emit also satisfies a one-time compliance demonstration with the BAT requirement in b)(1)a. above that states "the crematory incinerator shall be *designed* to meet 0.20 pounds of PE/PM₁₀ per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged." [emphasis added to the word "designed"]

If required, compliance with the above particulate emissions limitation pursuant to paragraph (B) of OAC rule 3745-17-09 shall be demonstrated based upon emissions testing performed according to Method 5 in Appendix A of 40 CFR Part 60 and the procedures specified in OAC rule 3745-17-03(B)(8).

b. Emissions Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 0.033 tons per month averaged over a twelve month rolling period. This emissions limitation applies only while the BAT requirements in b)(1)a. above are applicable.

Applicable Compliance Method:

The above emissions limitation was established by first determining the maximum hourly SO₂ emissions rate of 0.12 lb/hr based upon the best available emission factor for incinerators using the controlled-air process (see below). For this pollutant, an emission factor-based value was chosen instead of a stack test result for the following reasons: Only one of the five stack tests that were reviewed for this permit (see "a" above) included results for SO₂, and it was not the test conducted by the manufacturer of the subject cremation unit. The result for this one stack test was 0.08 lb_{SO2}/hr, which was lower than the emission



factor-based value of 0.12 lb_{SO2}/hr, so the higher number was chosen as a conservative measure.

The maximum hourly emissions rate was then multiplied by 18 hours per day, which is the realistic maximum amount of actual burn time for this batch-process operation*. The maximum pounds-per-day of emissions was then multiplied by 365 days per year and divided by 2000 lb/ton, then divided by 12 to obtain a monthly average, in tons.

$$\text{Emission Factor} = 3.23 \text{ lb}_{\text{SO}_2} / \text{ton}_{\text{CHARGE}}$$

Ref: AP-42 Table 2.1-9, controlled-air municipal solid waste combustors, modular, uncontrolled. (Emissions from natural gas combustion are assumed to be included in the above EF.)

$$3.23 \text{ lb}_{\text{SO}_2} / \text{ton} \div 2000 \text{ lb/ton} \times 75 \text{ lb/hr}_{\text{MAX BURN RATE}} \approx 0.12 \text{ lb}_{\text{SO}_2} / \text{hr}$$

$$0.12 \text{ lb}_{\text{SO}_2} / \text{hr} \times 18 \text{ hr/day} \times 365 \text{ days/yr} \div 2000 \text{ lb/ton} = 0.39 \text{ ton}_{\text{SO}_2} / \text{yr}$$

$$0.39 \text{ ton}_{\text{SO}_2} / \text{yr} \div 12 = 0.033 \text{ ton}_{\text{SO}_2} / \text{month}$$

* 18 hrs/day = 6 cycles x 3 hrs of burn time per cycle, as recommended by the manufacturer for the maximum charge of 200 lb. The remaining 6 hours per day consists of cool-down between cycles, ash removal, and loading of the next charge.

c. Emissions Limitation:

Nitrogen oxides (NO_x) emissions shall not exceed 0.102 tons per month averaged over a twelve month rolling period. This emissions limitation applies only while the BAT requirements in b)(1)a. above are applicable.

Applicable Compliance Method:

The above emissions limitation was established by first determining the maximum hourly NO_x emissions rate of 0.37 lb/hr based upon the results of stack tests that were reviewed for this permit (see "a" above). For this pollutant, a stack test result was chosen instead of an emission factor-based value for the following reasons: Two of the five stack tests included results for NO_x, and one of them was the test conducted by the manufacturer of the subject cremation unit. The larger of the stack test results was 0.37 lb_{NOx}/hr, while the largest emission factor-based value for incinerators using the controlled-air process was 0.13 lb_{NOx}/hr, so the higher stack-test number was chosen both as a conservative measure and because it was based upon actual cremations.

The maximum hourly emissions rate was then multiplied by 18 hours per day, which is the realistic maximum amount of actual burn time for this batch-process operation*. The maximum pounds-per-day of emissions was then multiplied by 365 days per year and divided by 2000 lb/ton, then divided by 12 to obtain a monthly average, in tons.

$$0.37 \text{ lb}_{\text{NO}_x} / \text{hr} \times 18 \text{ hr/day} \times 365 \text{ days/yr} \div 2000 \text{ lb/ton} = 1.22 \text{ ton}_{\text{NO}_x} / \text{yr}$$

$$1.22 \text{ ton}_{\text{NO}_x} / \text{yr} \div 12 = 0.102 \text{ ton}_{\text{NO}_x} / \text{month}$$



* 18 hrs/day = 6 cycles x 3 hrs of burn time per cycle, as recommended by the manufacturer for the maximum charge of 200 lb. The remaining 6 hours per day consists of cool-down between cycles, ash removal, and loading of the next charge.

d. Emissions Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.03 tons per month averaged over a twelve month rolling period. This emissions limitation applies only while the BAT requirements in b)(1)a. above are applicable.

Applicable Compliance Method:

The above emissions limitation was established by first determining the maximum hourly CO emissions rate of 0.11 lb/hr based upon the best available emission factor for incinerators using the controlled-air process (see below). For this pollutant, an emission factor-based value was chosen instead of a stack test result for the following reasons: Only one of the five stack tests that were reviewed for this permit (see "a" above) included results for CO, and even though it was the test conducted by the manufacturer of the subject cremation unit, the result for this one stack test was 0.03 lb_{CO}/hr, which was lower than the emission factor-based value of 0.11 lb_{CO}/hr, so the higher number was chosen as a conservative measure.

The maximum hourly emissions rate was then multiplied by 18 hours per day, which is the realistic maximum amount of actual burn time for this batch-process operation*. The maximum pounds-per-day of emissions was then multiplied by 365 days per year and divided by 2000 lb/ton, then divided by 12 to obtain a monthly average, in tons.

$$\text{Emission Factor} = 2.95 \text{ lb}_{\text{CO}} / \text{ton}_{\text{CHARGE}}$$

Ref: AP-42 Table 2.3-1, controlled-air medical waste incinerators, uncontrolled.
(Emissions from natural gas combustion are assumed to be included in the above EF.)

$$2.95 \text{ lb}_{\text{CO}}/\text{ton} \div 2000 \text{ lb}/\text{ton} \times 75 \text{ lb}/\text{hr}_{\text{MAX BURN RATE}} \approx 0.11 \text{ lb}_{\text{CO}}/\text{hr}$$

$$0.11 \text{ lb}_{\text{CO}}/\text{hr} \times 18 \text{ hr}/\text{day} \times 365 \text{ days}/\text{yr} \div 2000 \text{ lb}/\text{ton} = 0.36 \text{ ton}_{\text{CO}}/\text{yr}$$

$$0.36 \text{ ton}_{\text{CO}}/\text{yr} \div 12 = 0.03 \text{ ton}_{\text{CO}}/\text{month}$$

* 18 hrs/day = 6 cycles x 3 hrs of burn time per cycle, as recommended by the manufacturer for the maximum charge of 200 lb. The remaining 6 hours per day consists of cool-down between cycles, ash removal, and loading of the next charge.

e. Emissions Limitation:

Volatile organic compound (VOC) emissions shall not exceed 0.022 tons per month averaged over a twelve month rolling period. This emissions limitation applies only while the BAT requirements in b)(1)a. above are applicable.



Applicable Compliance Method:

The above emissions limitation was established by first determining the maximum hourly VOC emissions rate of 0.08 lb/hr based upon the results of stack tests that were reviewed for this permit (see "a" above). For this pollutant, a stack test result was chosen instead of an emission factor-based value for the following reasons: Only one of the five stack tests included results for VOC, and although it was not the test conducted by the manufacturer of the subject cremation unit, the result of 0.08 lb_{VOC}/hr was larger than the largest emission factor-based value for incinerators using the controlled-air process (0.06 lb_{VOC}/hr), so the higher stack-test number was chosen both as a conservative measure and because it was based upon actual cremations.

The maximum hourly emissions rate was then multiplied by 18 hours per day, which is the realistic maximum amount of actual burn time for this batch-process operation*. The maximum pounds-per-day of emissions was then multiplied by 365 days per year and divided by 2000 lb/ton, then divided by 12 to obtain a monthly average, in tons.

$$0.08 \text{ lb}_{\text{VOC}}/\text{hr} \times 18 \text{ hr}/\text{day} \times 365 \text{ days}/\text{yr} \div 2000 \text{ lb}/\text{ton} = 0.26 \text{ ton}_{\text{VOC}}/\text{yr}$$

$$0.26 \text{ ton}_{\text{VOC}}/\text{yr} \div 12 = 0.022 \text{ ton}_{\text{VOC}}/\text{month}$$

* 18 hrs/day = 6 cycles x 3 hrs of burn time per cycle, as recommended by the manufacturer for the maximum charge of 200 lb. The remaining 6 hours per day consists of cool-down between cycles, ash removal, and loading of the next charge.

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be demonstrated based upon visible emissions observations performed according to Method 9 in Appendix A of 40 CFR Part 60.

g) Miscellaneous Requirements

- (1) In accordance with ORC section 4717.13(A)(9), the permittee shall not cremate animals in a cremation chamber in which dead human bodies or body parts are cremated and the permittee shall not cremate dead human bodies or human body parts in a cremation chamber in which dead animals are cremated.