



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: May 19, 2011

RE: White River Cremation Center / 093-30335-00036

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot12/3/07



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Mr. John Kemple
White River Cremation Center
3522 Dixie Highway
Bedford, IN 47421

May 19, 2011

Re: Exempt Operation Status,
093-30335-00036

Dear John Kemple:

The application from White River Cremation Center, received on March 10, 2011, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following stationary human and animal crematory located at 3522 Dixie Highway, Bedford, Indiana 47421 is classified as exempt from air pollution permit requirements:

- (a) One (1) natural gas human pathological incinerator, identified as 01-PPII, approved for construction in 2011, with a maximum capacity of 150 pounds of remains per hour, consisting of a cremation and afterburner chamber that fire natural gas at a rate of 3 million British thermal units per hour (MMBTU/hr); and
- (b) One (1) natural gas pet pathological incinerator, identified as 02-PPJr., approved for construction in 2011, with a maximum capacity of 75 pounds of remains per hour, consisting of a cremation and afterburner chamber that fire natural gas at a rate of 2 million British thermal units per hour (MMBTU/hr).

The following conditions shall be applicable:

- (a) Pursuant to 326 IAC 4-2-2 (Incinerators), the crematory incinerators 01-PPII and 02-PPJr. shall:
 - (1) Consist of primary and secondary chambers or the equivalent;
 - (2) Be equipped with a primary burner unless burning only wood products;
 - (3) Comply with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2 (Permit Review Rules);
 - (4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
 - (5) Not emit particulate matter in excess of five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.
 - (6) If any of the above requirements (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.
 - (7) The incinerator is exempt from requirement (5) if subject to a more stringent particulate matter emissions limit in 40 CFR 52 Subpart P, State Implementation Plan for Indiana.
- (b) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixth (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (c) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (d) Pursuant to 326 IAC 11-8-1(b)(1), the crematory incinerators, 01-PPII and 02-PPJr., are not subject to the requirements of 326 IAC 11-8, because it will burn 90 % or more by weight of pathological waste and provided that the following are met:
 - (1) The Permittee shall notify the department and U.S. EPA that the unit meets the criteria in this subdivision.
 - (2) The Permittee shall keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, chemotherapeutic waste, or any combination of these wastes burned, and the weight of all other fuels and wastes burned in the unit.

This exemption is the first air approval issued to this source. A copy of the Exemption is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Charles Sullivan, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-232-8422 or at 1-800-451-6027 (ext 28422).

Sincerely,



Alfred C. Dumaul, Ph.D., Section Chief
Permits Branch
Office of Air Quality

ACD/cs

cc: File - Lawrence County
Lawrence County Health Department
U.S. EPA, Region V
IDEM Southeast Regional Office
Compliance and Enforcement Branch
Billing, Licensing, and Training

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name: White River Cremation Center
Source Location: 3522 Dixie Highway, Bedford, IN 47421
County: Lawrence
SIC Code: 7261
Exemption No.: 093-30335-00036
Permit Reviewer: Charles Sullivan

On March 10, 2011, the Office of Air Quality (OAQ) received an application from White River Cremation Center, related to the operation of new crematory incinerators for human and pet remains.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Lawrence County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Lawrence County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
Lawrence County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants
Lawrence County has been classified as attainment or unclassifiable in Indiana for Particulate Matter less than 10 micrometers (PM₁₀), Carbon monoxide (CO) and 8-hr Ozone (O₃). Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by White River Cremation Center on March 10, 2011, relating to the construction and operation of new human and animal cremation facility.

The following is a list of the new emission unit(s):

- (a) One (1) natural gas human pathological incinerator, identified as 01-PPII, approved for construction in 2011, with a maximum capacity of 150 pounds of remains per hour, consisting of a cremation and afterburner chamber that fire natural gas at a rate of 3 million British thermal units per hour (MMBTU/hr); and
- (b) One (1) natural gas pet pathological incinerator, identified as 02-PPJr., approved for construction in 2011, with a maximum capacity of 75 pounds of remains per hour, consisting of a cremation and afterburner chamber that fire natural gas at a rate of 2 million British thermal units per hour (MMBTU/hr).

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10*	PM2.5 ^a	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
02-PPJr. Pet Cremation Unit	1.1	1.1	1.1	0.4	0.5	0.5	1.6	--	--
01-PPII Human Cremation Unit	2.3	2.3	2.3	0.8	1.0	1.0	3.3	--	--
Natural Gas Combustion	0.04	0.17	0.17	0.02	2.19	0.12	1.84	0.04	n-Hexane 0.04
Total PTE of Entire Source	3.44	3.57	3.57	1.22	3.69	1.62	6.74	0.04	n-Hexane 0.04
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	25	10

negl. = negligible
 * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 a- PM2.5 emission factor uses PM10 as a surrogate.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the following New Source Performance Standards (NSPS) are not included in this exemption because crematory incinerator is considered a pathological waste combustor and is not considered a municipal waste combustor or hospital/medical/infectious waste incinerator:
 - (1) 40 CFR 60, Subpart Ea (60.50a through 60.59a), Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced after December 20, 1989 and on or before September 20, 1994 (326 IAC 12)
 - (2) 40 CFR 60, Subpart Eb (60.50b through 60.59b), Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced after September 20, 1994, or for Which Modification or Reconstruction is commenced after June 19, 1996 (326 IAC 12)

- (3) 40 CFR 60, Subpart Ec (60.50c through 60.58c), Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced after January 20, 1996 (326 IAC 12)
- (4) 40 CFR 60, Subpart AAAA (60.1000 through 60.1465), Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001 (326 IAC 12)
- (b) The requirements of 40 CFR 60, Subpart CCCC (60.2000 through 60.2265), Standards of Performance for Commercial and Industrial Solid Waste Incinerations Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001 (326 IAC 12), are not included in this exemption because this unit is considered pathological waste incineration unit (40 CFR 60.2020(a)).
- (c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the exemption for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of 40 CFR 63, Subpart EEE (63.1200 through 63.1214), NESHAP for Hazardous Waste Combustors (326 IAC 20-28-1), are not included in this exemption because the crematory incinerator is not considered a hazardous waste incinerator and the source is not a major source of HAPs.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in the exemption for this source.

Compliance Assurance Monitoring (CAM)

- (f) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This source was constructed after the applicability date of August 7, 1977. However, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(gg)(1), and the potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) is not applicable.

- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

Crematory

- (g) 326 IAC 4-2 (Incinerators)
Pursuant to 326 IAC 4-2-2 (Incinerators), the crematory incinerators 01-PPII and 02-PPJr. shall:
- (1) Consist of primary and secondary chambers or the equivalent;
 - (2) Be equipped with a primary burner unless burning only wood products;
 - (3) Comply with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2 (Permit Review Rules);
 - (4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c);
and
 - (5) Not emit particulate matter in excess of five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.
 - (6) If any of the above requirements (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

- (h) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The crematory is not considered a source of indirect heating. Therefore, the crematories are not subject to the provisions of 326 IAC 6-2.
- (i) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The crematories, 01-PPII and 02-PPJr. are incinerators. Pursuant to 326 IAC 6-3-1(b)(2), incinerators are exempt from the provisions of 326 IAC 6-3. Therefore, the crematories are not subject to the provisions of 326 IAC 6-3.
- (j) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The crematory incinerators, 01-PPII and 02-PPJr., are not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (k) 326 IAC 7-1 (Sulfur dioxide emission limitations: Applicability)
The crematory incinerators, 01-PPII and 02-PPJr., are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.
- (l) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.
- (m) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
This stationary source, constructed after the applicability date of March 21, 1972, is not subject to the requirements of 326 IAC 9-1-2(a)(3), since the crematory incinerators, 01-PPII and 02-PPJr., burn pathological waste and do not burn refuse consisting of more than 50 percent municipal type waste (household, commercial/retail, and/or institutional waste).
- (n) 326 IAC 11-7 (Emission Limitations for Municipal Waste Combustors)
The crematory incinerators, 01-PPII and 02-PPJr., are not subject to the requirements of 326 IAC 11-7, since the crematory incinerators are considered pathological waste combustors and not considered municipal waste combustors.
- (o) 326 IAC 11-8 (Emission Limitations for Commercial and Industrial Solid Waste Incineration Units)
Pursuant to 326 IAC 11-8-1(b)(1), the crematory incinerators, 01-PPII and 02-PPJr., are not subject to the requirements of 326 IAC 11-8, because the crematory incinerators burn 90 % or more by weight of pathological waste and provided that the following are met:
 - (a) The Permittee shall notify the department and U.S. EPA that the unit meets the criteria in this subdivision.
 - (b) The Permittee shall keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, chemotherapeutic waste, or any combination of these wastes burned, and the weight of all other fuels and wastes burned in the unit.
- (p) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (q) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on March 10, 2011.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 093-30335-00036. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Charles Sullivan at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8422 or toll free at 1-800-451-6027 extension 28422.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emission Calculations
Incinerator 02-PPJr- animal

Company Name: White River Cremation Center
Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421

Permit Number: 30335

Pit ID: 093-00036

Reviewer: C. Sullivan

Date: 4/13/2011

THROUGHPUT
lbs/hr
75

THROUGHPUT
ton/yr
328.5

	POLLUTANT						
	PM*	PM10*	PM2.5*	SO2	CO	VOC	NOX
Emission Factor in lb/ton	7.0	7.0	7.0	2.5	10.0	3.0	3.0
Potential Emissions in ton/yr	1.1	1.1	1.1	0.4	1.6	0.5	0.5

Methodology

Potential Throughput (tons/yr) = [Potential Throughput (lbs/hr)] * [8,760 hrs/yr] * [ton/2000 lbs]
 Potential to Emit (tons/yr) = [Potential Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2,000 lbs]
 Emission factors are from AP 42 (5th Edition 1/95) Table 2.1-12, Uncontrolled emission factors for industrial/commercial refuse combustors, multiple chambers
 Throughput (lb/hr) * 8760 hr/yr * ton/2000 lb = throughput (ton/yr)
 *No emission factor for PM10 and PM2.5 available (assume PM = PM10= PM2.5)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Incinerator 02-PPJr - NG

Company Name: White River Cremation Center
 Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421
 Permit Number: 30335
 Pit ID: 093-00036
 Reviewer: C. Sullivan
 Date: 4/13/2011

Heat Input Capacity MMBtu/hr
 Potential Throughput MMBtu/yr
 2.0
 17.5

	Pollutant						
	PM*	PM10*	PM2.5#	SO2	NOX	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.07	0.07	0.01	0.88	0.05	0.74

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 3
 # PM2.5 is a surrogate of PM10

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-02
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 3 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: White River Cremation Center

Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421

Permit Number: 30335

Pit ID: 093-00036

Reviewer: C. Sullivan

Date: 4/13/2011

HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.840E-05	1.051E-05	6.570E-04	1.577E-02	2.978E-05

HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.380E-06	9.636E-06	1.226E-05	3.329E-06	1.840E-05

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
 Incinerator 01-PP11- human

Company Name: White River Cremation Center
 Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421
 Permit Number: 30335
 PIT ID: 093-00036
 Reviewer: C. Sullivan
 Date: 4/13/2011

THROUGHPUT
 lbs/hr
 150

THROUGHPUT
 ton/yr
 657

		POLLUTANT						
		PM10*	PM10*	PM2.5*	SO2	CO	VOC	NOX
Emission Factor in lb/ton	PM10*	7.0	7.0	7.0	2.5	10.0	3.0	3.0
Potential Emissions in ton/yr	2.3	2.3	2.3	0.8	3.3	1.0	1.0	

Methodology

Potential Throughput (tons/yr) = [Potential Throughput (lbs/hr)] * [8,760 hrs/yr] * [ton/2000 lbs]
 Potential to Emit (tons/yr) = [Potential Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2,000 lbs]
 Emission factors are from AP 42 (5th Edition 1/95) Table 2.1-12, Uncontrolled emission factors for industrial/commercial refuse combustors, multiple chambers
 Throughput (lb/hr) * 8760 hr/yr * ton/2000 lb = throughput (ton/yr)
 *No emission factor for PM10 and PM2.5 available (assume PM = PM10= PM2.5)

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Incinerator 01-PP11-NG

Company Name: White River Cremation Center
 Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421

Permit Number: 30335

Pit ID: 093-00036

Reviewer: C. Sullivan

Date: 4/13/2011

Heat Input Capacity

MMBtu/hr

Potential Throughput

MMCF/yr

3.0

26.3

	Pollutant						
	PM*	PM10*	PM2.5#	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 ** see below	5.5	84
Potential Emission in tons/yr	0.02	0.10	0.10	0.01	1.31	0.07	1.10

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM2.5 is a surrogate of PM10

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 6 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: White River Generation Center

Address City IN Zip: 3522 Dixie Highway, Bedford, IN 47421

Permit Number: 30335

Pit ID: 093-00036

Reviewer: C. Sullivan

Date: 4/13/2011

		HAPs - Organics			
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.759E-05	1.577E-05	9.855E-04	2.365E-02	4.468E-05

		HAPs - Metals			
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	6.570E-06	1.445E-05	1.840E-05	4.993E-06	2.759E-05

Methodology is the same as page 5.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Emission Summary

Incinerators 01-PP11 & 02-PP1r.

Company Name: White River Cremation Center
 Address City IN Zip: 35222 Dixie Highway, Bedford, IN 47421
 Permit Number: 30335
 Pit ID: 093-00036
 Reviewer: C. Sullivan
 Date: 4/13/2011

Category	Uncontrolled Potential Emissions (tons/year)				
	Emissions Generating Activity			TOTAL	
	Incineration		Natural Gas Combustion		
Pollutant	Pets	Humans			
Criteria Pollutants	PM	1.10	2.30	0.04	3.44
	PM10	1.10	2.30	0.17	3.57
	PM2.5	1.10	2.30	0.17	3.57
	SO2	0.40	0.80	0.02	1.22
	NOx	0.50	1.00	2.19	3.69
	VOC	0.50	1.00	0.12	1.62
	CO	1.60	3.30	1.84	6.74
Hazardous Air Pollutants	Chromium	negl.	negl.	3.07E-05	3.07E-05
	Manganese	negl.	negl.	8.32E-06	8.32E-06
	Nickel	negl.	negl.	4.60E-05	4.60E-05
	n-Hexane	negl.	negl.	0.04	0.04
	Toluene	negl.	negl.	7.45E-05	7.45E-05
	Benzene	negl.	negl.	4.60E-05	4.60E-05
	Dichlorobenzene	negl.	negl.	2.63E-05	2.63E-05
	Formaldehyde	negl.	negl.	1.64E-03	1.64E-03
	Lead	negl.	negl.	1.10E-05	1.10E-05
	Cadmium	negl.	negl.	2.41E-05	2.41E-05
HAP Totals		0	0	0.04	0.04
Worse Case HAP				0.04	

Total Emissions based on rated capacity at 8,760 hours per year.
 negl. = negligible



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: John Kemple
White River Cremation Center
3522 Dixie Hwy
Bedford, IN 47421

DATE: May 19, 2011

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Exemption
093-30335-00036

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

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1		John Kemple White River Cremation Center 3522 Dixie Hwy Bedford IN 47421 (Source CAATS)										
2		John Sherrill Owner White River Cremation Center 3522 Dixie Hwy Bedford IN 47421 (RO CAATS)										
3		Bedford City Council and Mayors Office 1102 16th St Bedford IN 47421 (Local Official)										
4		Lawrence County Board of Commissioners 916 15th Street Bedford IN 47421 (Local Official)										
5		Mr. Anthony Wray 1861 Buddha Bypass Rd Bedford IN 47421 (Affected Party)										
6		Mr. Bobby Minton 7745 S. Fairfax Rd Bloomington IN 47401 (Affected Party)										
7		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)										
8		Mr. Danny Arnold 407 Northwood Dr Bedford IN 47421 (Affected Party)										
9		Mr. David Weatherholt Boilermaker Local #374 4777 East County Road 2100 North Dale IN 47523 (Affected Party)										
10		Mr. Don Sherry 1111 215 St. Tell City IN 47506-2815 (Affected Party)										
11		Mr. David Reed RR 1 Box 157 Jasonville IN 47438 (Affected Party)										
12		Lawrence County Health Department 2419 Mitchell Rd. Bedford, IN 47421 (Health Department)										
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