



# 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](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: July 28, 2010

RE: Morgan County Funeral Home / 109-29385-00061

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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Chris Branson  
DBA: Morgan County Funeral Home  
39 East High Street  
Mooresville, IN 46158

July 28, 2010

Re: Exempt Construction and Operation Status,  
EX109-29385-00061

Dear Mr. Branson:

The application from DBA: Morgan County Funeral Home, received on June 23, 2010, 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 crematorium located at 45 East High Street, Mooresville, IN 46158 is classified as exempt from air pollution permit requirements:

- (a) One (1) multiple chamber cremation retort for human remains, identified as EU-01, constructed in 2010 with maximum capacity of 150 pounds per hour, using natural gas at a heat input rate of 1.5 MMBtu per hour and exhausting through one (1) stack.
- (b) Fugitive emissions from paved roads and parking lots.

The following conditions shall be applicable:

1. 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 registration:
  - (a) 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.
  - (b) 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.
2. Pursuant to 326 IAC 4-2-2, the crematory incinerator (human cremation retort) 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 approved by the Administrator;
  - (5) The crematory incinerator shall 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 because the maximum solid waste capacity is less than two hundred (200) pounds per hour;

- (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; and
  - (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.
  - (8) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.
3. 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

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](http://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 Duane Van Laningham, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-6544 or at 1-800-451-6027 (ext 46544).

Sincerely,



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

ACD/dv

cc: File - Morgan County  
Moran County Health Department  
Compliance and Enforcement Branch  
Billing, Licensing and Training Section

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for an Exemption

<b>Source Description and Location</b>
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<b>Source Name:</b>	<b>DBA: Morgan County Funeral Home</b>
<b>Source Location:</b>	<b>45 East High Street, Mooresville, IN 46158</b>
<b>County:</b>	<b>Morgan</b>
<b>SIC Code:</b>	<b>7261</b>
<b>Exemption No.:</b>	<b>E109-29385-00061</b>
<b>Permit Reviewer:</b>	<b>Duane Van Laningham</b>

On June 23, 2010, the Office of Air Quality (OAQ) received an application from Morgan County Funeral Home related to the construction and operation of a new human crematory.

<b>Existing Approvals</b>
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There have been no previous approvals issued to this source.

<b>County Attainment Status</b>
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The source is located in Morgan County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective October 19, 2007, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM <sub>2.5</sub> .	

- (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. Morgan 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.

Morgan County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> 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 PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants  
 Morgan County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. 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 Morgan County Funeral Home on June 23, 2010, relating to the installation and operation of One (1) multiple chamber cremation retort for human remains, identified as EU-01 with maximum capacity of 150 pounds per hour, using natural gas at a heat input rate of 1.5 MMBtu per hour and exhausting through one (1) stack.

**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	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Incineration	0.023	0.02	0.02	0.01	0.01	0.01	0.03	-	-
Natural Gas Combustion	0.012	0.05	0.05	0.004	0.66	0.04	0.55	0.12	n-Hexane 0.012
<b>Total PTE of Entire Source</b>	<b>0.04</b>	<b>0.07</b>	<b>0.07</b>	<b>0.014</b>	<b>0.67</b>	<b>0.05</b>	<b>0.58</b>	<b>0.012</b>	n-Hexane 0.012
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	25	10

- (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 New Source Performance Standard for Incinerators, 40 CFR 60, Subpart E (326 IAC 12), are not included in the permit, since the human cremation retort has a charging rate of less than fifty (50) tons per day and does not burn refuse consisting of more than 50% municipal type waste.
- (b) The requirements of the New Source Performance Standard for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994, 40 CFR 60, Subpart Ea (326 IAC 12), are not included in this permit, because the human cremation retort was constructed after September 20, 1994. In addition, the human cremation retort is not designed to burn municipal solid waste. The human cremation retort is designed to burn only type 4 waste, which is pathological waste consisting of 100% animal and/or human tissue.
- (c) The requirements of the New Source Performance Standard for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994, 40 CFR 60, Subpart Eb (326 IAC 12), are not included in this permit, because the human cremation retort is not designed to burn municipal solid waste. The human cremation retort is designed to burn only type 4 waste, which is pathological waste consisting of 100% animal and/or human tissue.
- (d) The requirements of the New Source Performance Standard for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After January 20, 1996, 40 CFR 60, Subpart Ec (326 IAC 12), are not included in this permit, because the human cremation retort is not a hospital/medical/infectious waste incinerator as defined in 40 CFR 60.51c.
- (e) The requirements of the New Source Performance Standard 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, 40 CFR 60, Subpart AAAA (326 IAC 12), are not included in this permit, because the human cremation retort is not designed to burn municipal solid waste. The human cremation retort is designed to burn only type 4 waste, which is pathological waste consisting of 100% animal and/or human tissue.
- (f) The requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001, 40 CFR 60, Subpart CCCC (326 IAC 12), are not included in this permit, because the human cremation retort is not a commercial and industrial solid waste incineration (CISWI) unit as defined in 40 CFR 60.2265.
- (g) The requirements of the New Source Performance Standard for Other Solid Waste Incineration Units, 40 CFR 60, Subpart EEEE (326 IAC 12), are not included in this permit. The human cremation retort does not meet the definition of a small municipal waste combustion unit or an institutional waste incineration unit provided in 40 CFR 60.2977.
- (h) There are no other New Source Performance Standards (NSPS)(326 IAC 12 or 40 CFR Part 60) included in the permit.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (i) The requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for Hazardous Waste Combustors (40 CFR 63, Subpart EEE, 326 IAC 20-28) are not included in this permit, because each of the human cremation retort is not considered a hazardous waste incinerator as defined in 40 CFR 63.1201.

- (j) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (k) 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.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

326 IAC 2-1.1-3 (Exemptions)

Exemption applicability is discussed under the Permit Level Determination – Exemption section above.

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.

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.

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.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

The source is subject to the requirements of 326 IAC 6-4, because the paved roads and parking lots at the source have the potential to emit fugitive particulate emissions. 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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source is 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.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The emission unit 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.

Incinerator

326 IAC 4-2-2 Incinerators

Pursuant to 326 IAC 4-2-2, the crematory incinerator (human cremation retort) 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 approved by the Administrator;
- (5) The crematory incinerator shall 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 because the maximum solid waste capacity is less than two hundred (200) pounds per hour;
- (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; and
- (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.
- (8) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

326 IAC 6-2 applies to sources of indirect heating. The human cremation retort is not considered a source of indirect heating. Therefore, 326 IAC 6-2 does not apply.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(2), incineration is exempt. Therefore, 326 IAC 6-3 does not apply to the human cremation retort.

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 human cremation retort only burns pathological waste and does not burn refuse consisting of more than 50 percent municipal type waste (household, commercial/retail, and/or institutional waste).

326 IAC 11-6 (Hospital/Medical/Infectious Waste Incinerators)

The human cremation retort is not subject to the requirements of 326 IAC 11-6, since it is considered a pathological waste combustor and not a hospital/medical/infectious waste combustor.

326 IAC 11-7 (Emission Limitations for Municipal Waste Combustors)

The human cremation retort is not subject to the requirements of 326 IAC 11-7, since it is considered a pathological waste combustor and not municipal waste combustor.



326 IAC 11-8 (Commercial and Industrial Solid Waste Incineration Units)

The human cremation retort is not considered a Commercial and Industrial Incineration Unit.  
Therefore, 326 IAC 11-8 does not apply.

<b>Conclusion and Recommendation</b>
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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 June 23, 2010.

The construction and operation of this source shall be subject to the conditions of the attached proposed Exemption No. E109-29385-00061. The staff recommends to the Commissioner that this be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Duane Van Laningham at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 317-234-6544 or toll free at 1-800-451-6027 extension 46544.
- (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](http://www.in.gov/idem)

**Appendix A: Emissions Calculations  
Uncontrolled Potential to Emit Summary**

**Company Name: Morgan County Crematory**  
**Address City IN Zip: 45 East High Street, Mooresville 46158**  
**Permit Number: E109-29385-00061**  
**Pit ID: 109-00061**  
**Reviewer: Duane Van Laningham**

<b>Uncontrolled Potential to Emit (tons/year)</b>				
Emissions Generating Activity				
Category	Pollutant	Incineration	Natural Gas Combustion	<b>TOTAL</b>
Criteria Pollutants	PM	0.02	0.01	0.04
	PM10	0.02	0.05	0.07
	SO2	0.01	0.00	0.01
	NOx	0.01	0.66	0.67
	VOC	0.01	0.04	0.05
	CO	0.03	0.55	0.58
Hazardous Air Pollutants	Chromium		9.2E-06	9.2E-06
	Manganese		2.5E-06	2.5E-06
	Nickel		1.4E-05	1.4E-05
	n-Hexane		0.012	0.012
	Toluene		2.2E-05	2.2E-05
	Benzene		1.4E-05	1.4E-05
	Dichlorobenzene		7.9E-06	7.9E-06
	Formaldehyde		4.9E-04	4.9E-04
	Lead		3.3E-06	3.3E-06
	Cadmium		7.2E-06	7.2E-06
<b>Totals</b>		<b>0</b>	<b>0.01</b>	<b>0.012</b>
		<b>Worse Case HAP</b>		<b>0.012</b>

Uncontrolled total potential to emit are based on rated capacity at 8,760 hours/year.

**Appendix A: Emissions Calculations  
Multiple Chamber Industrial Incinerators (Process Emissions)**

**Company Name: Morgan County Crematory  
Address City IN Zip: 45 East High Street, Mooresville 46158  
Permit Number: E109-29385-00061  
Plt ID: 109-00061  
Reviewer: Duane Van Laningham**

			Pollutant	PM*	PM10*	SO2	NOx**	VOC	CO
			Emission Factor (lb/ton)	7.0	7.0	2.5	3.0	3.0	10.0
Emission Unit	Potential Throughput (lbs/hr)	Potential Throughput (tons/yr)	Uncontrolled Potential to Emit (tons/yr)						
			PM*	PM10*	SO2	NOx**	VOC	CO	
Crematory Incinerator 1 (Primary and Secondary Chamber)	1.5	6.6	0.02	0.02	0.01	0.01	0.01	0.01	0.03
<b>Totals</b>			<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>

**Methodology**

Potential Throughput (tons/yr) = [Potential Throughput (lbs/hr)] x [8,760 hrs/yr] x [1ton/2000 lbs]  
 Uncontrolled Potential to Emit (tons/yr) = [Potential Throughput (tons/yr)] x [Emission Factor (lb/ton)] x [1 ton/2,000 lbs]  
 where:

Emission factors are from AP-42 (5th Edition 1/95) Table 2.1-12, Uncontrolled emission factors for industrial/commercial refuse combustors, multiple chambers

\*No emission factor for PM10 available (assume PM = PM10)

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

**Abbreviations**

PM = Particulate Matter                      NOx = Nitrous Oxides  
 PM10 = Particulate Matter (<10 um)      VOC - Volatile Organic Compounds  
 SO2 = Sulfur Dioxide                        CO = Carbon Monoxide

**Appendix A: Emissions Calculations  
Natural Gas Combustion Emissions Only  
Incinerator rated at MM BTU/HR <100**

**Company Name: Morgan County Crematory**  
**Address City IN Zip: 45 East High Street, Mooresville 46158**  
**Permit Number: E109-29385-00061**  
**Plt ID: 109-00061**  
**Reviewer: Duane Van Laningham**

Emission Unit	Number of Units	Unit Heat Input Capacity (MMBtu/hr)	Combined Total Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Uncontrolled Potential to Emit (tons/yr)					
					PM*	PM10*	SO2	NOx**	VOC	CO
Crematory Incinerator 1 (Primary and Secondary Chamber)	1	1.5	1.5	13.14	0.012	0.050	0.004	0.657	0.036	0.552
<b>Totals</b>	<b>1</b>	<b>1.5</b>	<b>1.5</b>	<b>13.14</b>	<b>0.012</b>	<b>0.050</b>	<b>0.004</b>	<b>0.657</b>	<b>0.036</b>	<b>0.552</b>

Emission Unit	Uncontrolled Potential to Emit (tons/yr)									
	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Crematory Incinerator 1 (Primary and Secondary Chamber)	1.4E-05	7.9E-06	4.9E-04	0.012	2.2E-05	3.3E-06	7.2E-06	9.2E-06	2.5E-06	1.4E-05
<b>Totals</b>	<b>1.4E-05</b>	<b>7.9E-06</b>	<b>4.9E-04</b>	<b>0.012</b>	<b>2.2E-05</b>	<b>3.3E-06</b>	<b>7.2E-06</b>	<b>9.2E-06</b>	<b>2.5E-06</b>	<b>1.4E-05</b>

**Uncontrolled Total HAPs (tons/yr) 0.012**

**Methodology**

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

Uncontrolled Potential to Emit (tons/yr) = [Potential Throughput (MMCF/yr)] x [Emission Factor (lb/MMCF)] x [1 ton/2,000 lbs]

where:

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 1-03-006-03 (SUPPLEMENT D 3/98)

All emission factors are based on normal firing.

\*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

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

MMCF = 1,000 MMBtu, MMCF = 1,000,000 Cubic Feet of Gas

**Abbreviations**

PM = Particulate Matter	NOx = Nitrous Oxides	DCB = Dichlorobenzene	Cr = Chromium
PM10 = Particulate Matter (<10 um)	VOC - Volatile Organic Compounds	Pb = Lead	Mn = Manganese
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	Cd = Cadmium	Ni = Nickel



# 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](http://www.idem.IN.gov)

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

**TO:** Chris Branson  
Morgan County Funeral Home  
39 East High St  
Mooresville, IN 46158

**DATE:** July 28, 2010

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

**SUBJECT:** Final Decision  
Exemption  
109-29385-00061

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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07


# Mail Code 61-53

IDEM Staff	MIDENNEY 7/28/2010 DBA: Morgan County Crematory 109-29385-00061 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Chris Branson DBA: Morgan County Crematory 39 East High St Mooresville IN 46158 (Source CAATS) via confirmed delivery										
2		Morgan County Commissioners 180 South Main Street Martinsville IN 46151 (Local Official)										
3		Mooresville Town Council 4 E Harrison Street Mooresville IN 46158 (Local Official)										
4		Clayton D. & Patricia A. Arthur 5178 Brenda Boulevard Greenwood IN 46143 (Affected Party)										
5		Morgan County Health Department 180 S Main Street, Suite 252 Martinsville IN 46151-1988 (Health Department)										
6		T. K. Forslund 8147 E. Old St. Rd. 144 Mooresville IN 46158 (Affected Party)										
7		David Jones 7977 N. Taylors Rd. Mooresville IN 46158 (Affected Party)										
8		Claudia Parker 6761 Centenary Rd. Mooresville IN 46158 (Affected Party)										
9		James Swails 6568 E. Rosebud Lane Mooresville IN 46158 (Affected Party)										
10		John Thurston 6548 E. Watson Mooresville IN 46158 (Affected Party)										
11		Mitchell L. Gilman 322 Clay Street Morresville IN 46158 (Affected Party)										
12		Bible Stewart LLC 32 East Main Street Mooresville IN 46158 (Affected Party)										
13		Dorothy Gregory 49 East South Street Mooresville IN 46158 (Affected Party)										
14		Michael & Jolee Northway 3753 Whippoorwill Lake Monrovia In 46157 (Affected Party)										
15		Nancy Northway 60 East South Street Mooresville IN 46158 (Affected Party)										

Total number of pieces Listed by Sender  <b>14</b>	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Mooresville Board of Appeals 4 East Harrison Street Mooresville IN 46158 (Affected Party)										
2		Joe Beikman Superintendent Public Works 4 East Harrison Street Mooresville IN 46158 (Affected Party)										
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Total number of pieces Listed by Sender  <b>2</b>	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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