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Governor

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Commissioner

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TO: Interested Parties / Applicant
DATE: April 29, 2005
RE: Southlawn Cemetery / 141-2100-00556
FROM: Paul Dubenetzky
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, Room 1049, 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.dot 1/10/05

April 29, 2005

Mr. K. R. Palmer
Southlawn Cemetery
61300 U.S. 31 South
South Bend, IN 46614

Dear Mr. Palmer:

Re: Exempt Construction and Operation Status,
141-21001-00556

The application from Southlawn Cemetery, received on March 22, 2005, 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, to be located at 61300 U.S. 31 South in South Bend, Indiana, is classified as exempt from air pollution permit requirements:

One (1) 1.9 MMBtu/hr natural gas fired crematory incinerator for human remains, identified as Unit 001, with a maximum design capacity of one hundred (100) pounds of remains per hour, with all emissions exhausted through Stack PPII-1.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 4-2-2 (Incinerators):

(a) the crematory incinerator shall:

- (1) consist of primary and secondary chambers or the equivalent,
- (2) be equipped with a primary burner,
- (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:

(A) the manufacturer's specifications, or

(B) an operation and maintenance plan. If an operation and maintenance plan is developed in lieu of the manufacturer's specifications, then the Permittee must comply with the following:

(i) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in Part (a)(5) of this condition and include the following:

- (a) procedures for receiving, handling, and charging waste,
- (b) procedures for incinerator startup and shutdown,

- (c) procedures for responding to a malfunction,
 - (d) procedures for maintaining proper combustion air supply levels,
 - (e) procedures for operating the incinerator and associated air pollution control systems,
 - (f) procedures for handling ash, and
 - (g) a list of wastes that can be burned in the incinerator;
- (ii) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter;
 - (iii) The operation and maintenance plan must be readily accessible to the incinerator operators; and
 - (iv) The Permittee shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section, and
- (5) not emit particulate matter (PM) in excess of five-tenths (0.5) pounds per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.

If any of the requirements specified in (a)(1) through (a)(5) above are not met, then the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

- (b) The Permittee must make the manufacturer's specifications or the operation and maintenance plan available to the IDEM, Office of Air Quality upon request.
- (2) 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:
- (a) Opacity shall not exceed an average of forty percent (40%) 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) in a six (6) hour period 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.

This exemption is the first air approval issued to this source.

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.

Sincerely,

Original Signed by
Nisha Sizemore, Section Chief
Permits Branch
Office of Air Quality

SDF

cc: File - St. Joseph County
St. Joseph County Health Department
Air Compliance - Rick Reynolds
Northern Regional Office
Permit Tracking
Compliance Data Section

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description:

Source Name: Southlawn Cemetery
 Source Location: 61300 U.S. 31 South, South Bend, Indiana 46614
 County: St. Joseph
 SIC Code: 7261 (Funeral Service and Crematories)
 Exemption No.: 141-21001-00556
 Permit Reviewer: SDF

The Office of Air Quality (OAQ) has reviewed an application from Southlawn Cemetery relating to the construction and operation of a new crematory incinerator for human remains.

Emission Units and Pollution Control Equipment

One (1) 1.9 MMBtu/hr natural gas fired crematory incinerator for human remains, identified as Unit 001, with a maximum design capacity of one hundred (100) pounds of remains per hour, with all emissions exhausted through Stack PPII-1.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
PPII-1	Incinerator	18	1.66	2066	1067

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions.

A complete application for the purposes of this review was received on March 22, 2005.

Unless otherwise stated, information used in this review was derived from the application.

Emission Calculations

The emissions generated by the incinerator are the process pollutant emissions and the emissions generated by natural gas combustion. The following calculations determine the unrestricted potential emissions and the estimated emissions after controls.

Unrestricted Potential Emissions:

(a) Process Emissions:

The following calculations determine the unrestricted process emissions based on a maximum design capacity of 100 lb/hr, AP-42 emission factors, emissions before controls, and 8760 hours of operation.

$$100 \text{ lb prod./hr} * 1/2000 \text{ ton prod./lb prod.} * \text{Ef lb poll/ton prod.} * 8760 \text{ hr/yr} * 1/2000 \text{ ton poll./lb poll.} = \text{tons poll./yr}$$

	PM	PM10	SO2	NOx	VOC	CO	Single HAP	Comb. HAP
Ef (lb/ton)	7	7	2.5	3	3	10	neg.	neg.
Emissions (ton/yr)	1.53	1.53	0.55	0.66	0.66	2.19	neg.	neg.

(b) Combustion Emissions:

The following calculations determine the unrestricted combustion emissions based on a maximum capacity of 1.9 MMBtu/hr, natural gas combustion, AP-42 emission factors, emissions before controls, and 8760 hours of operation.

$$1.9 \text{ MMBtu/hr} * 1/1000 \text{ MMCF/MMBtu} * \text{Ef lb/MMCF} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \text{tons/yr}$$

Criteria Pollutants:

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
tons/yr	0.02	0.06	0.01	0.83	0.05	0.70

HAP:

Organics	Benzene 2.1E-3 lb/MMcf	Dichlorobenzene 1.2E-3 lb/MMcf	Formaldehyde 7.5E-2 lb/MMcf	Hexane 1.8 lb/MMcf	Toluene 3.4E-3 lb/MMcf
tons/yr	neg.	neg.	neg.	0.01	neg.

Metals	Lead 5.0E-4 lb/MMcf	Cadmium 1.1E-3 lb/MMcf	Chromium 1.4E-3 lb/MMcf	Manganese 3.8E-4 lb/MMcf	Nickel 2.1E-3 lb/MMcf
tons/yr	neg.	neg.	neg.	neg.	neg.

(c) Total Unrestricted Potential to Emit:

The total unrestricted potential to emit is the sum of the process and combustion emissions.

	PM	PM10	SO2	NOx	VOC	CO	Single HAP	Comb. HAP
Process (tons/yr)	1.53	1.53	0.55	0.66	0.66	2.19	neg.	neg.
Combustion (ton/yr)	0.02	0.06	0.01	0.83	0.05	0.70	0.01	0.01
Total	1.55	1.59	0.56	1.49	0.71	2.89	0.01	0.01

Emission After Controls

The emissions are uncontrolled. Therefore, the emissions after controls are equal to the estimated emissions before controls.

	PM	PM10	SO2	NOx	VOC	CO	Single HAP	Comb. HAP
Process (tons/yr)	1.53	1.53	0.55	0.66	0.66	2.19	neg.	neg.
Combustion (ton/yr)	0.02	0.06	0.01	0.83	0.05	0.70	0.01	0.01
Total	1.55	1.59	0.56	1.49	0.71	2.89	0.01	0.01

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

This table reflects the source PTE before controls due to the proposed changes. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	1.55
PM-10	1.59
SO ₂	0.56
VOC	0.71
CO	2.89
NO _x	1.49

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Worst case Single HAP	0.01
TOTAL	0.01

The proposed source potential to emit of all regulated pollutants, each, are less than their respective registration levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is determined to be exempt.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM ₁₀	attainment
PM _{2.5}	attainment
SO ₂	attainment
NO ₂	attainment
1-hour Ozone	attainment
8-hour Ozone	nonattainment
CO	attainment
Lead	attainment

Federal Rule Applicability

- (a) The crematory incinerator is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD, because it is neither a boiler nor a process heater.
- (b) This source is not subject to the requirements of 40 CFR 63 Subpart EEE (63.1200 through 63.1213), NESHAPs from Hazardous Waste Combustors (326 IAC 20-28-1), because the crematory incinerator is not considered a hazardous waste incinerator as defined in 63.1201.
- (c) This source is not subject to the requirements of 40 CFR 60 Subpart E (60.50 through 60.54), Standards of Performance for Incinerators (326 IAC 12), because the crematory incinerator has a charging rate less than fifty (50) tons per day and does not burn solid waste as defined in 60.51(b).
- (d) This source is not subject to the requirements of 40 CFR 60 Subpart Ea (60.50a through 60.59a), Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced after December 20, 1989 and On or Before September 20, 1994 (326 IAC 12), because the crematory incinerator does not combust municipal solid waste as defined in 60.51a, the capacity (1.2 tons/day) is less than the applicable capacity of 250 tons per day, and the incinerator will be constructed after the upper end applicable date of September 20, 1994.
- (e) This source is not subject to the requirements of 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), because the crematory incinerator does not combust municipal solid waste as defined in 60.51b and the capacity (1.2 tons/day) is less than the applicable capacity of 250 tons per day.
- (f) This source is not subject to the requirements of 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), because the crematory incinerator is not a hospital/medical/infectious waste incinerator as defined in 60.51c.
- (g) This source is not subject to the requirements of 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), because the crematory incinerator does not combust municipal solid waste as defined in 60.1465 and the capacity (1.2 tons/day) is less than the low end applicable capacity of 35 tons per day.

- (h) This source is not subject to the requirements of 40 CFR 60 Subpart BBBB (60.1500 through 60.1940), Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999 (326 IAC 12), because the crematory incinerator does not combust municipal waste as define in 60.1940 and will be constructed after the applicable date of August 30, 1999.
- (i) This source is not subject to the requirements of 40 CFR 60, Subpart CCCC (60.2000 through 60.2265), Standards of Performance 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, because the crematory incinerator does not combust solid waste as defined in 60.2265.
- (j) This source is not subject to the requirements of 40 CFR 60, Subpart DDDD (60.2500 through 60.2875), Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999, because the crematory incinerator will be constructed after the applicable date of November 30, 1999 and does not combust solid waste as defined in 60.2875.

State Rule Applicability - Entire Source

326 IAC 2-4.1 New Source Toxics Control

Although this proposed source will be constructed after July 27, 1997, the requirements of 326 IAC 2-4.1 do not apply because the single and combined HAP potential to emit are less than their respective applicable levels of ten (10) and twenty-five (25) tons per year.

326 IAC 5-1 (Opacity Limitations)

This proposed source is subject to 326 IAC 5 because the source generates particulate emissions.

Pursuant to 326 IAC 5-1-1(c)(6), the requirements of 326 IAC 5-1-2(2) apply if the source, located in St. Joseph County, is located north of Kern Road and east of Pine Road. The source is located east of Pine Road, but south of Kern Road. Therefore, the requirements of 326 IAC 5-1-2(2) do not apply to the proposed source.

Therefore, the proposed source is subject to the requirements of 326 IAC 5-1-2(1).

State Rule Applicability - Individual Facilities

326 IAC 4-2-2 (Incinerators)

The proposed incinerator is subject to the requirements of 326 IAC 4-2 because the incinerator emits regulated pollutants and is not one of the exemptions listed in 326 IAC 4-2-1(b).

The proposed incinerator will meet the requirements specified above and the manufacturer's guaranteed particulate emission rate is determined to be 0.12 pound PM per thousand pounds of dry exhaust gas, corrected to 50% excess air, which is less than the limit of 0.5 pound per one thousand (1,000) pounds of dry exhaust, corrected to fifty percent (50%) excess air. Thus, compliance with the rule is expected.

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

The proposed incinerator is not subject to the requirements of 326 IAC 6-3 because pursuant to 326 IAC 6-3-1(b)(2), incinerators are exempt from the requirements of 326 IAC 6-3.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The crematory incinerator is not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions are less than their respective applicable levels of twenty-five (25) tons per year and ten (10) pounds per hour.

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

The crematory incinerator is not subject to the requirements of 326 IAC 8-1-6 because the potential VOC emissions (0.71 ton/yr) are less than the applicable level of twenty-five (25) tons per year.

326 IAC 9-1-2 (Carbon Monoxide Emission Limitations)

The proposed incinerator is not subject to the requirements of 326 IAC 9-1-2(a)(3) because the proposed incinerator combusts pathological waste, not refuse.

Conclusion

The construction and operation of this crematory incinerator for human remains shall be subject to the conditions of the attached proposed Exemption No. 141-21001-00556.