



DATE: January 17, 2008  
TO: Interested Parties / Applicant  
RE: Asphalt Materials, Inc. / E097-25599-00098  
FROM: Patrick N. Carroll  
Deputy Director  
Department of Public Works  
City of Indianapolis

## 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 501, 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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | [knozone.com](http://knozone.com)

Department of Public Works  
Office of Environmental Services

2700 Belmont Avenue  
Indianapolis, IN 46221

317-327-2234  
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January 17, 2008

Michael Wertz  
Asphalt Materials, Inc.  
7901 West Morris Street  
Indianapolis, IN 46268

Dear Mr. Wertz:

Certified Mail Number: 7007 0710 0005 3965 8941

Re: Exempt Construction and Operation Status,  
**E097-25599-00098**

The application from Asphalt Materials, Inc. received on October 23, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3(h)(3), it has been determined that the following temporary pilot scale testing operation for zinc oxide recovery, located at 4902 West 86th Street, Indianapolis, Indiana, is classified as exempt from air pollution permit requirements:

- (a) One (1) 500,000 Btu/hr propane fired furnace, identified as emission unit CZO-1, constructed in 2007, using two (2) cartridge collectors for crude Zinc Oxide recovery, exhausting to stack identified as CZO-1.

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:
  - (a) Opacity shall not exceed an average of thirty percent (30%) 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 15 minutes (sixty (60) readings in a 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.
- (2) 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.
- (3) The cartridge collectors shall operate and control emissions at all times when the process is in operation.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by

Patrick N. Carroll  
Deputy Director  
Department of Public Works

cc: Files  
Air Compliance – Matt Mosier  
IDEM, OAQ – Mindy Hahn



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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
and  
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES**

Technical Support Document (TSD) for an Exemption

**Source Background and Description**

<b>Source Name:</b>	<b>Asphalt Materials, Inc.</b>
<b>Source Location:</b>	<b>5400 West 86th Street, Indianapolis, IN 46268</b>
<b>County:</b>	<b>Marion</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>E097-25599-00098</b>
<b>Permit Reviewer:</b>	<b>A. Nguyen</b>

The Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) have reviewed an application from Asphalt Materials, Inc. relating to the construction and operation of a pilot scale testing operation for recovering crude Zinc Oxide.

**Exempt Emission Units and Pollution Control Equipment**

The source also consists of the following exempt emission unit:

- (a) One (1) 500,000 Btu/hr propane fired furnace, identified as emission unit CZO-1, constructed in 2007, using two (2) cartridge collectors for crude Zinc Oxide recovery, exhausting to stack identified as CZO-1.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) FESOP F097-6035-00098 issued on July 8, 2003; and
- (b) First Significant Permit Revision F097-19336-00098 issued on November 12, 2004.

**Air Pollution Control Justification as an Integral Part of the Process**

The company has submitted the following justification such that the cartridge collectors be considered as an integral part of the operation. The primary function of the cartridge collector is not for air pollution control but for crude Zinc Oxide recovery. Crude Zinc Oxide recovery will be the primary source of revenue. Therefore, these collectors are a fundamental component to the process.

IDEM, OAQ, and OES have evaluated the justifications and agreed that the listed cartridge collectors will be considered as an integral part of the process. A similar determination was made for a temporary pilot-scale testing operation in Exemption E097-11935-00122, issued on May 2, 2000, on the cartridge collectors for the same furnace at a different source. Therefore, the

permitting level will be determined using the potential to emit after the cartridge collectors. Operating conditions in the proposed permit will specify that these cartridge collectors shall operate at all times when the process is in operation.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

Stack ID	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
CZO-1	13.0	1.0	4000.0	200.0

### Recommendation

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

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 October 23, 2007, with additional information received on November 27, 2007 and December 11, 2007.

### Emission Calculations

See Appendix A of this document for detailed emission calculations.

### Potential to Emit Before Controls of the Temporary Pilot Scale Project

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit 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.”

Pollutant	Potential to Emit (tons/yr)
PM	0.03
PM10	0.03
SO <sub>2</sub>	0.002
VOC	0.01
CO	0.05
NO <sub>x</sub>	0.34

HAPs	Potential to Emit (tons/yr)
Lead compounds	0.0021
Total	less than 25 tons

The pilot scale testing operation is considered a temporary operation and experiental trial. Pursuant to 326 IAC 2-1.1-3(h)(3), the emissions from temporary operations and experimental trials shall not exceed twenty-five (25) tons during a total operating time of thirty (30) days or less. Emissions from the temporary pilot scale testing operation were calculated according to 326 IAC 2-1.1-3(h)(3).

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated air pollutants are less than the levels listed in 326 IAC 2-1.1-3(h)(3) for temporary operations and experimental trials. Therefore, the pilot scale project is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the pilot scale project is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (c) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM10	Unclassifiable
PM2.5	Nonattainment
SO <sub>2</sub>	Maintenance attainment
NO <sub>x</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	unclassifiable

\*Note: On November 8, 2007 the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Clark, Floyd, Elkhart, St. Joseph, LaPorte, Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby Counties as attainment for the 8-hour ozone standard.

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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 emissions and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone.

On November 8, 2007, a temporary emergency rule took effect redesignating Marion County to attainment for the eight-hour ozone standard. The Indiana Air Pollution Control Board has begun the process for a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 should take effect prior to the expiration of the emergency rule. Therefore, VOC emissions and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (b) Marion County has been classified as nonattainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as surrogate for PM<sub>2.5</sub> emissions, pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

**Source Status**

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/yr)
PM	5.1
PM10	less than 5.1
SO <sub>2</sub>	less than 99.5
VOC	less than 40.7
CO	9.76
NO <sub>x</sub>	31.0
Single HAP	0.01
Combination HAPs	less than 25

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon the FESOP F097-6035-00098, issued on July 8, 2003.

**PTE of the Entire Source After the Issuance**

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	5.13
PM10	less than 5.13
SO <sub>2</sub>	less than 99.502
VOC	less than 40.71
CO	9.81
NO <sub>x</sub>	31.34
Single HAP	0.01
Combination HAPs	less than 25

- (a) This revision to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. After the modification, this source is still a minor source under 326 IAC 2-2.
- (b) Marion County has been designated as nonattainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit one hundred (100) tons per year of any nonattainment regulated pollutant. Asphalt Materials has a potential to emit of PM10 below one hundred (100) tons per year. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-1.1-5 does not apply for PM2.5.
- (c) After this revision, this source is still a minor source pursuant to the Part 70 Permit program.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit E097-25599-00098, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OES inspector assigned to the source.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this exemption.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this exemption.

## State Rule Applicability – Entire Source

### 326 2-1.1-3 (Exemptions)

Pursuant to 326 IAC 2-1.1-3(h)(3), the requirements for an operating permit revision under 326 IAC 2-6.1-6 or 326 IAC 2-8-11.1, modification approval under 326 IAC 2-7-10.5, or an administrative amendment under 326 IAC 2-8-10 shall not apply to temporary operations and experimental trials that involve construction or reconstruction of a facility or source that meet the following requirements:

- (a) The potential emissions from the construction or reconstruction of a facility or source or the potential emissions increase from the modification are less than twenty-five (25) tons for the duration of the operation.
- (b) The construction, reconstruction, or modification is not a major source or modification as defined by 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-7.
- (c) The purpose of the construction, reconstruction, or modification is to:
  - (1) collect data for experimental purposes, including but not limited to, process improvements, new product development, and pollution prevention; or
  - (2) temporarily conduct an operation not considered part of the normal operation or production of the facility or source.
- (d) The duration of the temporary operation or experimental trial is less than thirty (30) days of total operating time.

The pilot scale testing operation for zinc oxide recovery qualifies as a temporary operation and experimental trial because: (1) the total emissions during the project is less than 25 tons (see Appendix A), (2) it is not considered major under 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-7, (3) the purpose of the project is to collect data for the purposes of building a permanent operation at another location, (4) the zinc oxide recovery is not part of the normal operation for Asphalt Materials, and (5) the temporary operation will be less than 30 days total operating time.

**326 IAC 2-1.1-5 (Non-attainment New Source Review)**

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM<sub>10</sub> (as a surrogate for PM<sub>2.5</sub>). Therefore, the Non-attainment New Source Review requirements are not applicable.

**326 IAC 2-2 (Prevention of Significant Deterioration(PSD))**

This source is not a major source. This source is not one (1) of the twenty-eight (28) listed source categories. The potential to emit each criteria pollutant from the entire source is less than 250 tons per year and the potential to emit of lead is less than twenty-five (25) tons per year. Therefore, this source is a minor source and the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable.

**326 IAC 2-4.1 (Hazardous Air Pollutants)**

This source will emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 2-6 (Emission Reporting)**

Pursuant to 326 IAC 2-6-1(a)(1), (2), and (3), this source is not subject to 326 IAC 2-6 (Emission Reporting) because, as an FESOP source, it is not required to have an operating permit under 326 IAC 2-7, it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year, and it is not located in Lake or Porter Counties.

**326 IAC 2-8-4 (FESOP)**

This project is a temporary operation and experimental trial as described in 326 IAC 2-1.1-3(h)(3). Therefore, the modification approval requirements of 326 IAC 2-8-11.1 and the administrative amendment requirements under 326 IAC 2-8-10 do not apply to this project. The potential to emit of this project does not increase the source wide limited potential to emit to greater than one hundred (100) tons per year of PM, PM<sub>10</sub>, SO<sub>2</sub>, and VOC.

**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 the permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

**State Rule Applicability – Individual Facilities**

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

Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with the potential emissions less than five hundred fifty-one thousandths (0.551) pounds per hour of PM shall be exempt from 326 IAC 6-3. Emission unit CZO-1 has potential PM emissions less than 0.551 (See Appendix A, page 1). Therefore, 326 IAC 6-3 does not apply.

**Conclusion**

The construction and operation of this temporary pilot scale testing operation for recovering crude Zinc Oxide shall be subject to the conditions of the Exemption E097-25599-00098.

**Company Name:** Asphalt Materials, Inc.  
**Address City IN Zip:** 5400 West 86th Street, Indianapolis, IN 46268  
**Permit Number:** E097-25599-00098  
**Pit ID:** 097-00098  
**Reviewer:** A. Nguyen  
**Date:** 12/26/2007

**LPG-Propane - Industrial Boilers**

(Heat input capacity: > 0.3 MMBtu/hr and < 10 MMBtu/hr)

Heat Input Capacity MMBtu/hr 0.50      Potential Throughput kgals/year 48.40      SO2 Emission factor = 0.10 x S  
 S = Sulfur Content = 1.00 grains/100ft<sup>3</sup>

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.4	0.4	0.1 (0.10S)	14.0	0.5 **TOC value	1.9
Potential Emission in tons/yr	0.010	0.010	0.002	0.339	0.012	0.046

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu  
 1 gallon of propane has a heating value of 90,500 Btu (use this to convert emission factors to an energy basis for propane)  
 (Source - AP-42 (Appendix A) page A-6)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu  
 Emission Factors are from AP42 Chapter 1.5, Table 1.5-1 (10/96)

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

**PM and HAP emissions from furnace operations**

Max capacity = 320 pound per batch (lb/batch)      Capture efficiency of baghouse = 99%  
 Batch time = 12 hours per batch / one batch per day      Percent lead chloride in final product = 13%  
 Total operation time = 1 day per week for 10 weeks

Emissions are based on a material balance. To be conservative, everything put in the furnace is emitted to the baghouse.  
 Therefore, 320 lbs of material is emitted to the baghouse.  
 The baghouse was determined to be integral. Therefore, emissions are calculated after control.

PM emission (lbs/hr) = 320 lbs per batch x 1 batch per 12 hours x (1 - 0.99) = **0.267 lbs/hr**  
 PM emissions (tons/project) = 0.027 lbs/hr x 120 hour per total operation time = **0.016 tons/project**  
 Lead chloride emissions = 0.016 tons/year x 13% = **0.0021 tons/year**

**Emissions Summary**

PM	PM10	SO2	NOx	VOC	CO	HAPs
0.03	0.03	0.002	0.34	0.01	0.05	0.0021