



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: April 13, 2009

RE: Thermal Ceramics Elkhart Facility / 039-27348-00524

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

Notice of Decision: Approval - Effective Immediately

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 IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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 of 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.dot12/03/07



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

Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**Thermal Ceramics Elkhart Facility
2730 Industrial Parkway
Elkhart, Indiana 46516**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M039-27348-00524	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 13, 2009 Expiration Date: April 13, 2019

TABLE OF CONTENTS

A. SOURCE SUMMARY.....	4
A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]	
A.2 Emission Units and Pollution Control Equipment Summary	
B. GENERAL CONDITIONS	6
B.1 Definitions [326 IAC 2-1.1-1]	
B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability	
B.5 Severability	
B.6 Property Rights or Exclusive Privilege	
B.7 Duty to Provide Information	
B.8 Certification	
B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]	
B.10 Preventive Maintenance Plan [326 IAC 1-6-3]	
B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]	
B.13 Permit Renewal [326 IAC 2-6.1-7]	
B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]	
B.15 Source Modification Requirement	
B.16 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2] [IC 13-17-3-2][IC 13-30-3-1]	
B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]	
B.18 Annual Fee Payment [326 IAC 2-1.1-7]	
B.19 Credible Evidence [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	11
Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Permit Revocation [326 IAC 2-1.1-9]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-6.1-5(a)(2)]	
C.8 Performance Testing [326 IAC 3-6]	
Compliance Requirements [326 IAC 2-1.1-11]	
C.9 Compliance Requirements [326 IAC 2-1.1-11]	
Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]	
C.10 Compliance Monitoring [326 IAC 2-1.1-11]	
C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]	
C.12 Instrument Specifications [326 IAC 2-1.1-11]	
Corrective Actions and Response Steps	
C.13 Response to Excursions or Exceedances	

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

- C.15 Malfunctions Report [326 IAC 1-6-2]
- C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]
- C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2]
[IC 13-14-1-13]

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 17

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

- D.1.1 Particulate [326 IAC 6-3-2]
- D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

Compliance Determination Requirements

- D.1.3 Particulate Control

Certification 19
Annual Notification 20
Malfunction Report 21

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary high temperature insulation products (ceramic) manufacturing plant.

Source Address:	2730 Industrial Parkway, Elkhart, Indiana 46516
Mailing Address:	2730 Industrial Parkway, Elkhart, Indiana 46516
General Source Phone Number:	574-296-3535
SIC Code:	3479
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program
	Minor Source, under PSD and Emission Offset Rules
	Minor Source, Section 112 of the Clean Air Act
	Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) Two (2) high temperature ceramic insulation lines, constructed in 1986 and consisting of the following equipment:
 - (1) Four (4) mixing chambers with a total maximum throughput rate of 230 pounds of ceramic mix per hour.
 - (2) One (1) molding and curing facility with a maximum throughput rate of 50 pounds of ceramic mix per hour.
 - (3) One (1) machining facility with a maximum throughput rate of 50 pounds of ceramic parts per hour.
 - (4) One (1) fills/spread facility for product pressing with a maximum throughput rate of 180 pounds of ceramic mix per hour.

The above emission units are controlled by two (2) baghouses (identified as DC1 and DC2), operating in series, exhausting outside.

- (5) One (1) cutting facility with a maximum throughput rate of 180 pounds per hour, with no control, exhausting internally.
 - (6) One (1) quilting facility, consisting of a quilters, die cutters and finishing machines, with a maximum capacity of 180 pounds of fiber panels per hour, with no control, exhausting outside.
- (b) Three (3) storage silos (identified as S01, S02 and S03), with a combined maximum

throughput rate of 360 pounds of raw material per hour, controlled by bag filters.

- (c) One (1) water based surface coating facility, constructed in 1986, using airless spray application to coat ceramic molds, with a maximum throughput rate of 18 units per hour and less than 5 gallons of coating per day, controlled by dry filters, and exhausting at stack SV06.
- (d) Nineteen (19) natural gas-fired unit heaters and two (2) ovens, with a total maximum heat-input capacity of 4.85 MMBtu per hour.
- (e) One (1) natural gas-fired process furnace, mainly used for heating the facility, with a maximum heat input capacity of 2.3 MMBtu per hour, and exhausting at SV05.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M039-27348-00524, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M039-27348-00524 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.16 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due within thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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 permit:

- (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.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee 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 (Fugitive Dust Emissions).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three

(3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or

- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Two (2) high temperature ceramic insulation lines, constructed in 1986 and consisting of the following equipment:
- (1) Four (4) mixing chambers with a total maximum throughput rate of 230 pounds of ceramic mix per hour.
 - (2) One (1) molding and curing facility with a maximum throughput rate of 50 pounds of ceramic mix per hour.
 - (3) One (1) machining facility with a maximum throughput rate of 50 pounds of ceramic parts per hour.
 - (4) One (1) fills/spread facility for product pressing with a maximum throughput rate of 180 pounds of ceramic mix per hour.
- The above emission units are controlled by two (2) baghouses (identified as DC1 and DC2), operating in series, exhausting outside.
- (5) One (1) cutting facility with a maximum throughput rate of 180 pounds per hour, with no control, exhausting internally.
 - (6) One (1) quilting facility, consisting of a quilters, die cutters and finishing machines, with a maximum capacity of 180 pounds of fiber panels per hour, with no control, exhausting outside.
- (b) Three (3) storage silos (identified as S01, S02 and S03), with a combined maximum throughput rate of 360 pounds of raw material per hour, controlled by bag filters.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions shall be limited as follows:

The pounds per hour limitations were calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable PM Emissions (lb/hr)(326 IAC 6-3-2)
(4) Mixing Chambers	230 (57.5 each)	0.96 <0.551 each
Molding/curing	50	0.34 <0.551
Machining	50	0.34 <0.551
Fills/Spread	180	0.81
Cutting	180	0.81
Quilting	180	0.81
(3) Silos	360 (120 each)	1.29

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device.

Compliance Determination Requirements

D.1.3 Particulate Control

- (a) In order to comply with D.1.1, the two (2) baghouses (identified as DC1 and DC2) for particulate control shall be in operation and control emissions from the two (2) high temperature insulation lines at all times that the two (2) high temperature insulation lines are in operation.
- (b) In order to comply with D.1.1, the bag filters for particulate control shall be in operation and control emissions from the three (3) storage silos at all times that the three (3) silos are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**MINOR SOURCE OPERATING PERMIT (MSOP)
CERTIFICATION**

Source Name: Thermal Ceramics Elkhart Facility
Source Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
Mailing Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP No.: M039-27348-00524

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)_____
- Report (specify)_____
- Notification (specify)_____
- Affidavit (specify)_____
- Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Thermal Ceramics Elkhart Facility
Address:	2730 Industrial Parkway
City:	Elkhart, Indiana 46516
Phone #:	574-296-3535
MSOP #:	M039-27348-00524

I hereby certify that Thermal Ceramics Elkhart Facility is : still in operation.
 no longer in operation.

I hereby certify that Thermal Ceramics Elkhart Facility is : in compliance with the requirements of MSOP M039-27348-00524.
 not in compliance with the requirements of MSOP M039-27348-00524.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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

Technical Support Document (TSD) for a Minor Source Operating Permit Renewal

Source Background and Description

Source Name:	Thermal Ceramics Elkhart Facility
Source Location:	2730 Industrial Parkway, Elkhart, Indiana 46514
County:	Elkhart
SIC Code:	3479
Permit Renewal No.:	039-27348-00524
Permit Reviewer:	Janet Mobley

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Thermal Ceramics Elkhart Facility relating to the operation of a stationary high temperature ceramic insulation products manufacturing plant.

History

On January 8, 2009, Thermal Ceramics Elkhart Facility submitted an application to the OAQ requesting to renew its operating permit. Thermal Ceramics Min-K Division was issued a New Construction MSOP 039-17912-00524 on April 13, 2004. The operating name of the company is changed from Thermal Ceramics Min-K Division to Thermal Ceramics Elkhart Facility at this renewal.

Permitted Emission Units and Pollution Control Equipment

- (a) Two (2) high temperature ceramic insulation lines, constructed in 1986 and consisting of the following equipment:
 - (1) Four (4) mixing chambers with a total maximum throughput rate of 230 pounds of ceramic mix per hour.
 - (2) One (1) molding and curing facility with a maximum throughput rate of 50 pounds of ceramic mix per hour.
 - (3) One (1) machining facility with a maximum throughput rate of 50 pounds of ceramic parts per hour.
 - (4) One (1) fills/spread facility for product pressing with a maximum throughput rate of 180 pounds of ceramic mix per hour.

The above emission units are controlled by two (2) baghouses (identified as DC1 and DC2), operating in series, exhausting outside.

- (5) One (1) cutting facility with a maximum throughput rate of 180 pounds per hour, with no control, exhausting internally.
 - (6) One (1) quilting facility, consisting of a quilters, die cutters and finishing machines, with a maximum capacity of 180 pounds of fiber panels per hour, with no control, exhausting outside.
- (b) Three (3) storage silos (identified as S01, S02 and S03), with a combined maximum throughput rate of 360 pounds of raw material per hour, controlled by bag filters.

- (c) One (1) water based surface coating facility, constructed in 1986, using airless spray application to coat ceramic molds, with a maximum throughput rate of 18 units per hour and less than 5 gallons of coating per day, controlled by dry filters, and exhausting at stack SV06.
- (d) Nineteen (19) natural gas-fired unit heaters and two (2) ovens, with a total maximum heat-input capacity of 4.85 MMBtu per hour.
- (e) One (1) natural gas-fired process furnace, mainly used for heating the facility, with a maximum heat input capacity of 2.3 MMBtu per hour, and exhausting at SV05.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

The source does not have any emission units that were constructed and/or operating without a permit during this review.

Emission Units and Pollution Control Equipment Removed From the Source

The source does not have any emission units that were removed from the source during this review.

Existing Approvals

Since the issuance of the MSOP (039-17912-00524) on April 13, 2004, the source has not constructed or received any other approvals.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 2007, 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.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.

- (a) Ozone Standards
 - (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
 - (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
 - (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
 - (4) 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. Elkhart 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) Elkhart County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 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 PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) Other Criteria Pollutants
Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is still less than 100 tons per year. PM, PM10 and PM2.5 is each greater than 25 tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.
- (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/or 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.
- (c) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit (tons/year)							
	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	HAPs
4 Mixing Chambers, Molding & Curing, Machining, Fills/Spread for Product Pressing	30.0	30.0	30.0	0.00	2.19	0.00	0.00	2.19
Quilting Operation	0.00	0.00	0.00	0.00	21.00	0.00	0.00	0.00
(3) Resin Silos	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00
Surface Coating Facility	0.63	0.63	0.63	0.00	0.04	0.00	0.00	0.00
Natural Gas (19) Unit Heaters and (2) Ovens	0.16	0.16	0.16	0.01	0.12	1.79	2.12	0.00
Natural Gas Process Furnace	0.08	0.08	0.08	0.01	0.06	0.85	1.01	0.00
Total Emissions	31.42	31.42	31.42	0.02	23.41	2.63	3.13	2.19
TV Major	-	100	100	100	100	100	100	10/25
PSD Major	250	250	250	250	250	250	250	-

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

CAM

The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit. This source is operating as a MSOP. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this source.

NSPS/NESHAPs

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) This source is not subject to the requirements of the New Source Performance Standard (NSPS), 40 CFR 60, Subpart FFF - Standard of Performance for Flexible Vinyl and Urethane Coating and Printing (326 IAC 12) because this source does not use any rotogravure printing line to print or coat flexible vinyl or urethane products.
- (c) This source is not subject to the requirements of the New Source Performance Standard (NSPS), 40 CFR 60, Subpart PPP - Standards of Performance for Wool Fiberglass

Insulation Manufacturing Plant because this source does not utilize a rotary spin wool fiberglass insulation manufacturing line.

- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.
- (e) This source is not subject to the requirements of 40 CFR 63, Subpart RRRRRR— National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing Area Sources. This source does not own or operate a clay ceramics manufacturing facility, does not have an atomized glaze spray booth or kiln that fires glazed ceramic ware, does not processes more than 45 megagrams per year (Mg/yr) (50 tons per year (tpy)) of wet clay and it is not an area source of hazardous air pollutant (HAP) emissions.
- (f) This source is not subject to the requirements of 40 CFR 63, Subpart U - National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins because this source does not manufacture Group I polymers and resins.
- (g) This source is not subject to the requirements of 40 CFR 63, Subpart W - National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production because this source does not produce epoxy resins or non-nylon polyamides.
- (h) This source is not subject to the requirements of 40 CFR 63, Subpart JJJ - National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins because this source is not a major source of hazardous air pollutants.

State Rule Applicability - Entire Source

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

This source was a minor source when it was built in 1986 and is not in one (1) of the twenty-eight (28) listed source categories. The potential to emit of each criteria pollutant and PM from the entire source was less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs))

This source does not have HAP emissions greater than the HAP major source thresholds. Therefore, the source is not subject to the provisions of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit of each criteria pollutant is less than one hundred (100) 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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

- (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.

State Rule Applicability – High Temperature Insulation Lines

326 IAC 8-1-6 (New Facilities-General Reduction Requirement)

Although constructed after January 1, 1980, the molding facility and quilting facility each do not have potential VOC emissions equal to or greater than twenty-five (25) tons per year. Therefore, these facilities are not subject to the provisions of 326 IAC 8-1-6.

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the one (1) cutting facility, the one (1) fills/spread bags, the one (1) quilting facility and from each of the three (3) silos shall be limited as follows.

The pounds per hour limitations were calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and } P = \text{process weight rate in tons per hour}$$

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, particulate emissions from each of the four (4) mixing chambers, the one (1) molding and pressure curing facility, and the one (1) machining facility shall each not exceed 0.551 pounds per hour.

The baghouses (DC1 and DC2) and bag filters for particulate control shall be in operation at all times the two (2) high temperature insulation lines and three (3) silos are in operation, in order to comply with this rule.

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable PM Emissions (lb/hr)(326 IAC 6-3-2)
(4) Mixing Chambers	230 (57.5 each)	<0.551 each
Molding/curing	50	<0.551
Machining	50	<0.551
Fills/Spread	180	0.81
Cutting	180	0.81
Quilting	180	0.81
(3) Silos	360 (120 each)	1.29

State Rule Applicability - Surface Coating Facility

326 IAC 8-1-6 (New Facilities-General Reduction Requirement)

Although constructed after January 1, 1980, the surface coating facility does not have potential VOC emissions equal to or greater than twenty-five (25) tons per year. Therefore, this source is not subject to the provisions of 326 IAC 8-1-6.

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

The surface coating facility is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this facility uses less than five (5) gallons of coating per day pursuant to 326 IAC 6-3-1(a)(15).

State Rule Applicability - One (1) Process Furnace, Two (2) Ovens, Nineteen (19) Unit Heaters

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The one (1) process furnace, the two (2) ovens, and the nineteen (19) space heaters are not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because particulate emissions from these units are from combustion only.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-6 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The two (2) baghouses (identified as DC1 and DC2) for particulate control shall be in operation and control emissions from the two (2) high temperature insulation lines (consisting of four (4) mixing chambers, three (3) silos, one (1) molding and curing facility, one (1) machining facility, and one (1) fills/spread bags at all times that the two (2) high temperature insulation lines are in operation.

Recommendation

The staff recommends to the Commissioner that the MSOP Renewal 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 January 8, 2009, and additional information received on February 13, and February 25, 2009.

Conclusion

The operation of this stationary high temperature insulation products (ceramic) manufacturing plant shall be subject to the conditions of the attached MSOP Renewal No. 039-27348-00524.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Janet Mobley 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) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.
- (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.idem.in.gov.

**Appendix A: Emission Calculations
Summary**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP Renewal: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

POTENTIAL TO EMIT BEFORE CONTROLS

Emission Units	PM	PM10	PM2.5	SO₂	VOC	CO	NOx	HAPs
4 Mixing Chambers, Molding & Curing, Machining, Fills/Spread for Product Pressing Facility	30.0	30.0	30.00	0.00	2.19	0.00	0.00	2.19
Quilting Operation	0.00	0.00	0.00	0.00	21.00	0.00	0.00	
(3) Resin Silos (S01,S02 and S03)	0.55	0.55	0.55	0.00	0.00	0.00	0.00	
Surface Coating Facility	0.63	0.63	0.63	0.00	0.04	0.00	0.00	
Natural Gas (19) unit heaters and ovens (2)	0.16	0.16	0.16	0.01	0.12	1.78	2.12	
Natural Gas Process Furnace	0.08	0.08	0.08	0.01	0.06	0.85	1.01	
TOTAL	31.42	31.42	31.42	0.02	23.41	2.63	3.13	<10/25

This PTE was based on the MSOP 0390-17912-00524, issued on April 12, 2004.

**Appendix A: Emission Calculations
PM/PM10 Emissions
From Mixing Chambers, Molding & Curing, Machining, Fills/Spread Facilities**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: 039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Primary Baghouse

		PTE After Control PM/PM10	PTE Before Control PM/PM10
*Particulate Control Equipment = Baghouse		(ton per year)	
Grain Loading in grains/acf	0.002	1.50	30.0
Air Flow Rate in acf/min	20000		
Control Efficiency in %	95%		

* Assume all PM emissions are equal to PM10 emissions.

Secondary Baghouse

		PTE After Control PM/PM10	PTE Before Control PM/PM10
*Particulate Control Equipment = Baghouse		(ton per year)	
Grain Loading in grains/acf	0.002	0.23	4.51
Air Flow Rate in acf/min	3000		
Control Efficiency in %	95%		

* Assume all PM emissions are equal to PM10 emissions.

Methodology

PTE of PM/PM10 (tons/year) after control = Grain loading (grains/acf) * Air flow rate (acf/minutes) * 60 minutes/hour * 1 lb/7000 grains * 8760 hour/year * 1 ton /2000 lb

PTE OF PM/PM10 (tons/year) = PTE After Control PM/PM10 / (1-Control%)

**Appendix A: Emissions Calculations
VOC & HAP Emissions
From Molding Operation**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Material	Max.Usage Rate (lbs/hour)	Weight % Volatiles	PTE of VOC/HAP	
			(lb/hour)	(ton/year)
Resins	50	1.00%	0.50	2.19

METHODOLOGY

PTE of VOC (lb/hour) = Max.Usage Rate (lbs/hour) * Weight % Volatiles

PTE of VOC (tons/year) = Max.Usage Rate (lbs/hour) * Weight % Volatiles * 8760 hours/year * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
VOC Emissions
From Quilting Operation**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

POTENTIAL TO EMIT OF VOC

Max. No of Fiber Panels Per Hour =	20.0
Weight % Loss Per Panel After Curing =	0.24
Weight % Loss Per Hour =	4.80
% VOC	100%
PTE of VOC (lbs/hour) =	4.80
PTE of VOC (lbs/day) =	115.20
PTE of VOC (tons/year) =	21.0
Actual Emissions (lbs/day) =	31.1
TOTAL	21.0

METHODOLOGY

PTE of VOC (lbs/hour) = Max. no of fiber panels (no. of panels/hour) * Weight % loss per panel post curing * % VOC

PTE of VOC (lbs/day) = PTE of VOC lb/hour * 24 hours/day

PTE of VOC (tons/year) = Max. no of fiber panels (no. of panels/hour) * Weight % loss per panel post curing * % VOC * 8760 hours/year * 1 ton/2000 lbs

Actual VOC Emissions (lbs/day) = PTE of VOC (lbs/hour) * Actual Hours of Operation (2020 hours)/year * 1/ Actual Days of Operation (240 days)/year

**Appendix A: Emission Calculations
PM/PM10 Emissions
From Three (3) Resin Silos (S01, S02 and S03)**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Emission Unit	Max. Throughput Rate (lbs/hour)	Emission Factor (lb/ton)	Controlled PTE of PM/PM10 (lbs/hour)	Controlled PTE of PM/PM10 (tons/year)	Control Efficiency %	Uncontrolled PTE of PM/PM10 (tons/year)
Resin Silos	360	0.007	1.3E-03	5.5E-03	99%	0.55

Assume all PM emissions are equal to PM10.

* There are no emission factors available for PVOH resin handling. Therefore, the emission factors are from AP-42, Chapter 11.26 (Talc Processing), Table 11.26-1 SCC 3-05-089-85 (November 1995) was used.

Control = Bag filters with 99 % efficiency

METHODOLOGY

Controlled PTE of PM/PM10 (lbs/hour) = Max. Throughput Rate of Resin (lbs/hour) * Emission Factor (lb/ton) * 1 ton/2000 lbs

Controlled PTE of PM/PM10 (tons/year) = Max.Throughput Rate of Resin (lbs/hour) * Emission Factor (lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs

Uncontrolled PTE of PM/PM10 (tons/year) =Controlled PTE of PM/PM10 (tons/year) * 1/(1 - Control Efficiency %)

**Appendix A: Emissions Calculations
VOC and PM/PM10 Emissions
From One (1) Paint Booth**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Max Usage (gal/unit)	Max (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE of VOC (lbs/hour)	PTE of VOC (lbs/day)	PTE of VOC (tons/year)	PTE of PM/PM10 (ton/year)	*Transfer Efficiency	PTE of PM/PM10 (lbs/hour)
Acrylic Coating	13.0	32.0%	30.0%	2.0%	49.9%	68.0%	0.002	18.0	0.52	0.26	0.01	0.22	0.04	0.63	55%	0.14
TOTAL											0.01	0.2	0.04	0.63	0.14	
Actual Emissions (lbs/day) =										0.06						

* Coating is applied using airless and air atomization guns

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = Density (lb/gal) * Weight % Organics
PTE of VOC (lbs/hour) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hour)
PTE of VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hour) * 24 hours/day
PTE of VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hour) * 8760 hours/year * 1 ton/2000 lbs
PTE of PM/PM10 (tons/year) = Max. (units/hour) * Gal of Material (gal/unit) * Density (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer Efficiency %) * 8760 hours/year * 1 ton/2000 lbs
PTE of PM/PM10 (lbs/hour) = Maximum (unit/hour) * Gal of Material (gal/unit) * Density (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer Efficiency %)
Actual VOC Emissions (lbs/day) = PTE of VOC (lbs/hour) * Actual Hours of Operation (2020 hours)/year * 1/ Actual Days of Operation (312 days)/year

Appendix A: Emission Calculations
Nineteen (19) Unit Heaters, Two (2) Ovens

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Heat Input Capacity
 MMBtu/hour
 4.85 (21 units only)

Potential Throughput
 MMCF/year
 42.5

	Pollutant					
	* PM	* PM10	SO ₂	** NO _x	VOC	CO
Emission Factor (lb/MMCF)	7.6	7.6	0.6	100	5.5	84.0
Potential To Emit (tons/year)	0.16	0.16	0.01	2.12	0.12	1.78

*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

**Emission factors for NO_x (Uncontrolled) = 100 lb/MMCF.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations
Nineteen (19) Space Heaters, Two (2) Ovens**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	4.46E-05	2.55E-05	1.59E-03	3.82E-02	7.22E-05

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	1.06E-05	2.34E-05	2.97E-05	8.07E-06	4.46E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations
One (1) Process Furnace (Combustion Only)**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

Heat Input Capacity
MMBtu/hour
2.30 (1 unit only)

Potential Throughput
MMCF/year
20.1

Pollutant						
Emission Factor (lb/MMCF)	* PM 7.6	* PM10 7.6	SO ₂ 0.6	** NO _x 100	VOC 5.5	CO 84.0
Potential To Emit (tons/year)	0.08	0.08	0.01	1.01	0.06	0.85

*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

**Emission factors for NO_x (Uncontrolled) = 100 lb/MMCF.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations
One (1) Process Furnace**

Company Name: Thermal Ceramics Elkhart Facility
Address: 2730 Industrial Parkway, Elkhart, Indiana 46516
MSOP: M039-27348-00524
Reviewer: Janet Mobley
Date: January 14, 2009

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	2.12E-05	1.21E-05	7.56E-04	1.81E-02	3.43E-05

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	5.04E-06	1.11E-05	1.41E-05	3.83E-06	2.12E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.