



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: September 28, 2011

RE: Abrasive Processing & Technologies / 059-30287-00015

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



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New Source Review and Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Abrasive Processing and Technologies
712 East Ohio Street
Fortville, Indiana 46040**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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 FESOP under 326 IAC 2-8.

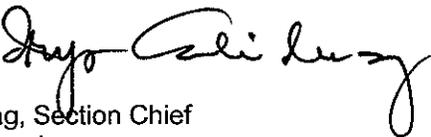
Operation Permit No.: F059-30287-00015	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 28, 2011 Expiration Date: September 28, 2021

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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 through A.3 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 2-8-3(b)]

The Permittee owns and operates a stationary abrasive blasting operation of various metal parts and formed products, for the trade.

Source Address:	712 East Ohio Street, Fortville, Indiana 46040
General Source Phone Number:	317-485-7702
SIC Code:	3471 (Electroplating, Plating, Polishing, Anodizing and Coloring)
County Location:	Hancock
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State 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 [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) blast booth equipped with one (1) nozzle, identified as BB1, equipped with a dust collector, identified as DC-1, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of aluminum oxide per hour, horizontal exhaust Stack BB1-DC.
- (b) One (1) blast booth equipped with one (1) nozzle, identified as BB2, equipped with a dust collector, identified as DC-2, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,680 pounds of aluminum oxide or other media per hour, interior exhaust through Stack BB2-DC.
- (c) One (1) enclosed blast booth equipped with one (1) nozzle, identified as BB3, equipped with a dust collector, identified as DC-3, constructed in 2011, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of sodium bicarbonate per hour, exhausting internally.
- (d) Twelve (12) wheel blast machines, interior exhausts, consisting of:
 - (1) Two (2) wheel blast machines, identified as Wheel 1 through Wheel 2, equipped with a baghouse, identified as Wh1-2, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.
 - (2) Two (2) wheel blast machines, identified as Wheel 3 through Wheel 4, equipped with a baghouse, identified as Wh3-4, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.
 - (3) One (1) wheel blast machine, identified as Wheel 5, equipped with a baghouse,

- identified as Wh5, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (4) One (1) wheel blast machine, identified as Wheel 6, equipped with a baghouse, identified as Wh6, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (5) One (1) wheel blast machine, identified as Wheel 7, equipped with a baghouse, identified as Wh7, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (6) One (1) wheel blast machine, identified as Wheel 11, equipped with a baghouse, identified as Wh11, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (7) One (1) wheel blast machine, identified as Wheel 12, equipped with a baghouse, identified as Wh12, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (8) One (1) wheel blast machine, identified as Wheel 8, equipped with a baghouse, identified as Wh8, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.
 - (9) One (1) wheel blast machine, identified as Wheel 9, equipped with a baghouse, identified as Wh9, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.
 - (10) One (1) wheel blast machine, identified as Wheel 10, each equipped with a baghouse, identified as Wh10, installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, consisting of a cold cleaner with remote reservoir, installed in 1998 [326 IAC 8-3-2] [326 IAC 8-3-5].
- (b) Two (2) natural-gas fired pyrolysis cleaning furnaces, identified as A and B, constructed in 2007, each equipped with an integral secondary combustion chamber to remove non-hazardous hydrocarbons, and coatings from the metal parts, each with a maximum throughput of 20 pounds per hour of combustible material and each rated at 0.95 MMBTU per hour, exhausting to the outside through stacks A and B, respectively.
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations consisting of the cabinet blast and the four (4) peening blasters (Exempt from 326 IAC 6-3-2).
- (d) Four (4) natural gas combustion space heaters, each with a maximum capacity of 0.25 MMBtu per/hr and exhausting inside.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F059-30287-00015, 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 [326 IAC 2-8-6] [IC 13-17-12]

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 [326 IAC 2-8-4(4)]

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 [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (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. 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 [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent 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 Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 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, Indiana 46204-2251
- (b) The annual compliance certification report 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) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) 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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) 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.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F059-30287-00015 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.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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

Permit 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 nine (9) months 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 2-8 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, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

- (4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][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 FESOP 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) 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.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
 - (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent emissions per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
 - (c) Pursuant to 326 IAC 2-2 (PSD), potential to emit of green house gasses (CO₂e) from the entire source shall be limited to less than 100,000 tons per twelve (12) consecutive month period.
 - (d) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
 - (e) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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, Indiana 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 that meets the requirements of 326 IAC 2-8-5(a)(1) 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.

Testing Requirements [326 IAC 2-8-4(3)]

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

- (a) For performance testing required by this permit, 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, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

- (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 [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (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 record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) blast booth equipped with one (1) nozzle, identified as BB1, equipped with a dust collector, identified as DC-1, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of aluminum oxide per hour, horizontal exhaust Stack BB1-DC.
- (b) One (1) blast booth equipped with one (1) nozzle, identified as BB2, equipped with a dust collector, identified as DC-2, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,680 pounds of aluminum oxide or other media per hour, interior exhaust through Stack BB2-DC.
- (c) One (1) enclosed blast booth equipped with one (1) nozzle, identified as BB3, equipped with a dust collector, identified as DC-3, constructed in 2011, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of sodium bicarbonate per hour, exhausting internally.
- (d) Twelve (12) wheel blast machines, interior exhausts, consisting of:
 - (1) Two (2) wheel blast machines, identified as Wheel 1 through Wheel 2, equipped with a baghouse, identified as Wh1-2, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.
 - (2) Two (2) wheel blast machines, identified as Wheel 3 through Wheel 4, equipped with a baghouse, identified as Wh3-4, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.
 - (3) One (1) wheel blast machine, identified as Wheel 5, equipped with a baghouse, identified as Wh5, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (4) One (1) wheel blast machine, identified as Wheel 6, equipped with a baghouse, identified as Wh6, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (5) One (1) wheel blast machine, identified as Wheel 7, equipped with a baghouse, identified as Wh7, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (6) One (1) wheel blast machine, identified as Wheel 11, equipped with a baghouse, identified as Wh11, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (7) One (1) wheel blast machine, identified as Wheel 12, equipped with a baghouse, identified as Wh12, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
 - (8) One (1) wheel blast machine, identified as Wheel 8, equipped with a baghouse, identified as Wh8, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.
 - (9) One (1) wheel blast machine, identified as Wheel 9, equipped with a baghouse, identified as Wh9, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.

(10) One (1) wheel blast machine, identified as Wheel 10, each equipped with a baghouse, identified as Wh10, installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.

(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 2-8-4(1)]

D.1.1 PM₁₀ and PM_{2.5} [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 326 IAC 2-8, the PM₁₀ and PM_{2.5} emissions shall not exceed the emission limits listed in the table below.

Emission Unit(s) (Control Device)	PM₁₀ Emission Limit (lbs/hr)	PM_{2.5} Emission Limit (lbs/hr)
BB1 (DC-1)	0.057	0.057
BB2 (DC-2)	0.076	0.076
BB3 (DC-3)	0.057	0.057
Wheels 1 & 2 (Wh1-2)	4.11	4.11
Wheels 3 & 4 (Wh3-4)	4.11	4.11
Wheel 5 (Wh5)	2.05	2.05
Wheel 6 (Wh6)	2.05	2.05
Wheel 7 (Wh7)	2.05	2.05
Wheel 8 (Wh8)	1.03	1.03
Wheel 9 (Wh9)	1.03	1.03
Wheel 10 (Wh10)	1.03	1.03
Wheel 11 (Wh11)	2.05	2.05
Wheel 12 (Wh12)	2.05	2.05

Compliance with these limits, combined with the potential to emit PM₁₀ and PM_{2.5} from all other emission units at this source, shall limit the source-wide total potential to emit of PM₁₀ and PM_{2.5} to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

D.1.2 PM [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the total potential to emit particulate matter (PM) from the blast booths and wheel blast machines shall not exceed the pounds per hour limitation as listed in the following table:

Emission Unit(s) (Control Device)	PM Emission Limit (lbs/hr)
BB1 (DC-1)	0.057
BB2 (DC-2)	0.076
BB3 (DC-3)	0.057
Wheels 1 & 2 (Wh1-2)	4.11
Wheels 3 & 4 (Wh3-4)	4.11
Wheel 5 (Wh5)	2.05
Wheel 6 (Wh6)	2.05
Wheel 7 (Wh7)	2.05
Wheel 8 (Wh8)	1.03
Wheel 9 (Wh9)	1.03
Wheel 10 (Wh10)	1.03
Wheel 11 (Wh11)	2.05
Wheel 12 (Wh12)	2.05

Compliance with these limits combined with the potential PM emissions from all other emission units at this source shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.3 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the abrasive blasting operations shall be limited as follows:

Emission Unit(s) (Control Device)	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)
BB1 (DC-1)	2.07	6.68
BB2 (DC-2)	2.34	7.25
BB3 (DC-3)	2.07	6.68
Wheel 1 (Wh1-2)	0.70	1.61
Wheel 2 (Wh1-2)	0.70	1.61
Wheel 3 (Wh3-4)	0.70	1.61
Wheel 4 (Wh3-4)	0.70	1.61
Wheel 5 (Wh5)	0.35	2.03
Wheel 6 (Wh6)	0.35	2.03

Emission Unit(s) (Control Device)	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)
Wheel 7 (Wh7)	0.35	2.03
Wheel 8 (Wh8)	0.15	1.15
Wheel 9 (Wh9)	0.15	1.15
Wheel 10 (Wh10)	0.150	1.15
Wheel 11 (Wh11)	0.350	2.03
Wheel 12 (Wh12)	0.350	2.03

The pounds per hour limitations were calculated with 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:

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

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and the control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.5 Particulate Control

In order to comply with Conditions D.1.1, D.1.2 and D.1.3, each of the blast booths and wheel blast machines shall be controlled by the associated dust collector, as listed in the table below, when these units are in operation:

Unit ID	Control ID
BB1	DC-1
BB2	DC-2
BB3	DC-3
Wheels 1 & 2	Wh1-2
Wheels 3 & 4	Wh3-4
Wheel 5	Wh5
Wheel 6	Wh6
Wheel 7	Wh7
Wheel 8	Wh8
Wheel 9	Wh9
Wheel 10	Wh10
Wheel 11	Wh11
Wheel 12	Wh12

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.6 Visible Emissions Notations

- (a) Daily visible emission notations of the blast booth stack exhaust, identified as BB1-DC, exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across each of the dust collectors, identified as DC-1, DC-2, DC-3, used to control emissions from blast booths, identified as BB1, BB2, and BB3 at least once per day when the associated blast booths are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of 1.0 and 4.0 inches of water or a range, established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the baghouses, identified as, Wh1-2, Wh3-4, Wh5, Wh6, Wh7, Wh8, Wh9, Wh10, Wh11 and Wh12 used to control emissions from the wheel blast machines, identified as Wh1 through Wh12, at least once per day when the wheel blast machines Wheel 1 through Wheel 12 are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 2.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

D.1.8 Broken or Failed Bag Detection

- (a) For a single compartment dust collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately

until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (b) For a single compartment dust collector controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the dust collector's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.6, the Permittee shall maintain records of the Permittee shall maintain daily records of the visible emissions notations of the dust collectors stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (i.e. the process did not operate that day).
- (b) To document the compliance status with Condition D.1.7, the Permittee shall maintain the daily records of the pressure drop across the dust collectors controlling the shot blasters. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the process did not operate that day).
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, consisting of a cold cleaner with remote reservoir, installed in 1998 [326 IAC 8-3-2] [326 IAC 8-3-5].

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under

the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (b) Two (2) natural-gas fired pyrolysis cleaning furnaces, identified as A and B, constructed in 2007, each equipped with an integral secondary combustion chamber to remove non-hazardous hydrocarbons, and coatings from the metal parts, each with a maximum throughput of 20 pounds per hour of combustible material and each rated at 0.95 MMBTU per hour, exhausting to the outside through stacks A and B, respectively.

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.2.1 Incinerators [326 IAC 4-2-2]

Each of the pyrolysis cleaning ovens (identified as A and B) each has a maximum solid waste capacity of less than 100 pounds per hour. Pursuant to 326 IAC 4-2 (Incinerators), each of these two incinerator units shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
- (e) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.
- (f) If any of the requirements of (d)(1) through (d)(5) above are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

The Permittee operating the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

D.2.2 Carbon Monoxide Emission Limits [326 IAC 9-1-2]

Pursuant to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits), the Permittee shall not operate the pyrolysis cleaning ovens (identified as A and B) unless the waste gas stream is burned in one of the following:

- (a) Direct-flame afterburner; or
- (b) Secondary chamber.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Abrasive processing and Technologies
Source Address: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Permit No.: F059-30287-00015

**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 AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Abrasive processing and Technologies
Source Address: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Permit No.: F059-30287-00015

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Abrasive processing and Technologies
 Source Address: 712 East Ohio Street, Fortville, Indiana 46040
 FESOP Permit No.: F059-30287-00015

Months: _____ **to** _____ **Year:** _____

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked ΔNo deviations occurred this reporting period@.</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Addendum to the Technical Support Document (ATSD) for a
Federally Enforceable Source Operating Permit (FESOP) with New Source
Review (NSR)

Source Background and Description
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Source Name:	Abrasive Processing and Technologies
Source Location:	712 East Ohio Street, Fortville, Indiana 46040
County:	Hancock
SIC Code:	3471
MSOP No.:	F059-30287-00015
Permit Reviewer:	Swarna Prabha

On August 23, 2011, the Office of Air Quality (OAQ) had a notice published in Daily Reporter, Greenfield, Indiana, stating that Abrasive Processing and Technologies, Inc. had applied for a Federally Enforceable Source operating Permit renewal with new source review related to the abrasive blasting operation of various metal parts and formed products, for trade. The notice also stated that the OAQ proposed to issue a Federally Enforceable Source Operating Permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Additional Changes

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes.

IDEM, OAQ has decided to make additional revision to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO₂ equivalent emissions (CO₂e). Therefore, CO₂e emissions have been calculated for this source. Based on the calculations the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO₂e per year (see TSD Appendix A for detailed calculations).

IDEM has revised the Permit Condition C.2 (Overall Source Limit) as follows to clarify the applicability of greenhouse gases (GHGs) emission limitations pursuant 326 IAC 2-8.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
 - (4) **The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO2 equivalent emissions per twelve (12) consecutive month period.**
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

...

IDEM Contact

- (a) Questions regarding this proposed Minor Source Operating Permit can be directed to Swarna Prabha 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) 234-5376 or toll free at 1-800-451-6027 extension (45376).
- (b) A copy of the permit 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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Review and
Federally Enforceable State Operating Permit Renewal

Source Background and Description
--

Source Name:	Abrasive Processing and Technologies
Source Location:	712 East Ohio Street, Fortville, Indiana 46040
County:	Hancock
SIC Code:	3471 (Electroplating, Plating, Polishing, Anodizing and Coloring)
Permit Renewal No.:	F 059-30287-00015
Permit Reviewer:	Swarna Prabha

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Abrasive Processing and Technologies, relating to the abrasive blasting operation of various metal parts and formed products, for the trade. The SIC code of 3471 (Electroplating, Plating, Polishing, Anodizing and Coloring) was chosen because one of the activities listed under this code is "Shotblasting of metal parts, for the trade". This source does not perform electroplating, plating, coloring and anodizing.

On March 01, 2011, Abrasive Processing and Technologies submitted an application to the OAQ requesting to renew its operating permit. During this renewal the source requested to add an enclosed existing abrasive blaster unit, similar to the existing unit and the removal of one belt room gluing operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) One (1) blast booth equipped with one (1) nozzle, identified as BB1, equipped with a dust collector, identified as DC-1, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of aluminum oxide per hour, horizontal exhaust Stack BB1-DC.
- (b) One (1) blast booth equipped with one (1) nozzle, identified as BB2, equipped with a dust collector, identified as DC-2, installed prior to 2000, maximum capacity 3,000 pounds and a media throughput of 1,680 pounds of aluminum oxide or other media per hour, interior exhaust through Stack BB2-DC.
- (c) One (1) enclosed blast booth equipped with one (1) nozzle, identified as BB3, equipped with a dust collector, identified as DC-3, constructed in 2011, maximum capacity 3,000 pounds and a media throughput of 1,144 pounds of sodium bicarbonate per hour, exhausting internally.
- (d) Twelve (12) wheel blast machines, interior exhausts, consisting of:
 - (1) Two (2) wheel blast machines, identified as Wheel 1 through Wheel 2, equipped with a baghouse, identified as Wh1-2, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.
 - (2) Two (2) wheel blast machines, identified as Wheel 3 through Wheel 4, equipped with a baghouse, identified as Wh3-4, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour, each.

- (3) One (1) wheel blast machine, identified as Wheel 5, equipped with a baghouse, identified as Wh5, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (4) One (1) wheel blast machine, identified as Wheel 6, equipped with a baghouse, identified as Wh6, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (5) One (1) wheel blast machine, identified as Wheel 7, equipped with a baghouse, identified as Wh7, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (6) One (1) wheel blast machine, identified as Wheel 11, equipped with a baghouse, identified as Wh11, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (7) One (1) wheel blast machine, identified as Wheel 12, equipped with a baghouse, identified as Wh12, installed prior to 2000, capacity: 400 pounds of product and 300 pounds of steel and/or stainless steel shot per hour.
- (8) One (1) wheel blast machine, identified as Wheel 8, equipped with a baghouse, identified as Wh8, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.
- (9) One (1) wheel blast machine, identified as Wheel 9, equipped with a baghouse, identified as Wh9, , installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.
- (10) One (1) wheel blast machine, identified as Wheel 10, each equipped with a baghouse, identified as Wh10, installed prior to 2000, capacity: 100 pounds of product and 200 pounds of steel and/or stainless steel shot per hour.

Insignificant Activities

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21). The four natural gas combustion heaters, each with a capacity of 0.25 MMBtu/hr were inadvertently left out from the permit No. F59-17669-00015, are added during this renewal.

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, consisting of a cold cleaner with remote reservoir, installed in 1998 [326 IAC 8-3-2] [326 IAC 8-3-5].
- (b) Two (2) natural-gas fired pyrolysis cleaning furnaces, identified as A and B, constructed in 2007, each equipped with an integral secondary combustion chamber to remove non-hazardous hydrocarbons, and coatings from the metal parts, each with a maximum throughput of 20 pounds per hour of combustible material and each rated at 0.95 MMBTU per hour, exhausting to the outside through stacks A and B, respectively.
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations consisting of the cabinet blast and the four (4) peening blasters (Exempt from 326 IAC 6-3-2).

- (d) Four (4) natural gas combustion space heaters, each with a maximum capacity of 0.25 MMBtu per/hr and exhausting inside.

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

The following unpermitted emission unit and pollution control equipment being added during this renewal period:

One (1) enclosed blast booth equipped with one (1) nozzle, identified as BB3, equipped with a dust collector, identified as DC-3, approved for construction in 2011, capacity: 3,000 pounds and a media throughput of 1,144 pounds of aluminum oxide per hour, exhausting inside.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission unit:

One (1) belt room gluing operation, equipped with rollcoating applicators, exhausted to Stack G1, installed in March 1990, capacity: 500 feet of belts per hour.

Existing Approvals

Since the issuance of the FESOP (059-17669-00015) on November 28, 2006, the source has constructed or has been operating under the following additional approvals:

Administrative Amendment No. 059-25830-00015 issued on February 19, 2008.

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

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit".

IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Hancock County.

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

Pollutant	Designation
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Hancock County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Hancock County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
 Hancock County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	Greater than 250
PM ₁₀	Greater than 100, less than 250
PM _{2.5}	Greater than 100, less than 250
SO ₂	less than 100
VOC	less than 100
CO	less than 100
NO _x	less than 100
GHGs as CO ₂ e	Less than 100,000
Single HAP	Less than 10
Total HAP	Less than 25

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 PM10 and PM2.5 is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5 emissions to less than Title V levels, therefore the Permittee will be issued a FESOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.
- (d) 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.

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Potential to Emit After Issuance

The source has opted to remain a FESOP source. 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 FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHG as CO ₂ e****	Total HAPs	Worst Single HAP
Blast Booth BB1	0.25	0.25	0.25	0	0	0	0	0	0	0
Blast Booth BB2	0.33	0.33	0.33	0	0	0	0	0	0	0
Blast Booth BB3	0.25	0.25	0.25	0	0	0	0	0	0	0
Wheels 1 & 2	18	18	18	0	0	0	0	0	0	0
Wheels 3 & 4	18	18	18	0	0	0	0	0	0	0
Wheel 5	8.979	8.979	8.979	0	0	0	0	0	0	0
Wheel 6	8.979	8.979	8.979	0	0	0	0	0	0	0
Wheel 7	8.979	8.979	8.979	0	0	0	0	0	0	0
Wheel 8	4.5	4.5	4.5	0	0	0	0	0	0	0
Wheel 9	4.5	4.5	4.5	0	0	0	0	0	0	0
Wheel 10	4.5	4.5	4.5	0	0	0	0	0	0	0
Wheel 11	8.979	8.979	8.979	0	0	0	0	0	0	0
Wheel 12	8.979	8.979	8.979	0	0	0	0	0	0	0
Insignificant Activities										
Grinding and machining 4 peening machines	0.4	0.4	0.4	0	0	0	0	0	0	0
**Two (2) Pyrolysis Furnaces A & B	0.61	0.61	0.61	0.219	0.263	0.263	0.808	0	0	0
***Four (4) Natural gas combustion	0.024	.097	0.097	0.008	1.27	0.07	1.067	1,533.5	0.024	0.024
Degreaser	0.12	0.12	0.12	0	0	0.065	0	0	0.0	0.0
Total PTE of Entire Source	96.30	96.37	96.37	0.23	1.53	0.40	1.07	1,533.5	0.024	0.024
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
<p>*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".</p> <p>**Combustion Emissions from Pyrolysis furnaces are not included. These are process emissions only.</p> <p>*** Combustion Emissions from Pyrolysis furnaces are also included in addition to space heaters.</p> <p>The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.</p>										

Federal Rule Applicability

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

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS), 326 IAC 12 and 40 CFR Part 60) Subpart AAAA—Standards of Performance for Small Municipal Waste Combustion Units included in the permit for this source.
- (b) The requirements of the New Source Performance Standards (NSPS) , 40 CFR Part 60 municipal waste combustion unit has the capacity to combust at least 35 tons per day but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) 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.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 63.11514, Subpart XXXXXX (National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories) are not included in the permit, because this source do not have the potential to emit metals, defined to be the compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), in the amounts greater than or equal to 0.1 percent by weight (of the metal), and materials that contain manganese in amounts greater than or equal to 1.0 percent by weight (of the metal), and is not one of the listed SIC code for the "Fabricated Metal Products".

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 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 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.

326 IAC 6.5 PM Limitations Except Lake County

This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

State Rule Applicability – Individual Facilities

326 IAC 2-8-4 (FESOP)

- (a) Pursuant to 326 IAC 2-8-4 (FESOP), the PM10 and PM2.5 emissions from the blast booths and wheel blast machines shall not exceed the pounds per hour limitation as listed in the following table. The sum of the PM10 and PM2.5 emissions from the blast booths and wheel blast machines are equivalent to 95.265 tons per year each.

Emission Unit(s) (Control Device)	PM ₁₀ Emission Limit (lbs/hr)	PM _{2.5} Emission Limit (lbs/hr)
BB1 (DC-1)	0.057	0.057
BB2 (DC-2)	0.076	0.076
BB3 (DC-3)	0.057	0.057
Wheels 1 & 2 (Wh1-2)	4.11	4.11
Wheels 3 & 4 (Wh3-4)	4.11	4.11
Wheel 5 (Wh5)	2.05	2.05
heel 6 (Wh6)	2.05	2.05
Wheel 7 (Wh7)	2.05	2.05
Wheel 8 (Wh8)	1.03	1.03
Wheel 9 (Wh9)	1.03	1.03
Wheel 10 (Wh10)	1.03	1.03
Wheel 11 (Wh11)	2.05	2.05
Wheel 12 (Wh12)	2.05	2.05

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

- (b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the total potential to emit particulate matter (PM) from the blast booths and wheel blast machines shall not exceed the pounds per hour limitation as listed in the following table.

Emission Unit(s) (Control Device)	PM Emission Limit (lbs/hr)
BB1 (DC-1)	0.057
BB2 (DC-2)	0.076
BB3 (DC-3)	0.057
Wheels 1 & 2 (Wh1-2)	4.11
Wheels 3 & 4 (Wh3-4)	4.11

Emission Unit(s) (Control Device)	PM Emission Limit (lbs/hr)
Wheel 5 (Wh5)	2.05
heel 6 (Wh6)	2.05
Wheel 7 (Wh7)	2.05
Wheel 8 (Wh8)	1.03
Wheel 9 (Wh9)	1.03
Wheel 10 (Wh10)	1.03
Wheel 11 (Wh11)	2.05
Wheel 12 (Wh12)	2.05

Compliance with these limits combined with the potential PM emissions from all other emission units at this source shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

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

Pursuant to 326 IAC 6-3-2, the particulate from the blast booths and wheel blast machines shall not exceed the pounds per hour limitation as listed in the following table:

Emission Unit(s) (Control Device)	Process Weight Rate		Allowable PM Emissions (lbs/hr)
	(lbs/hr)	(tons/hr)	
BB1 (DC-1)	4,144	2.07	6.68
BB2 (DC-2)	4,680	2.34	7.25
BB3 (DC-3)	4,144	2.07	6.68
Wheels 1 (Wh1-2)	700	0.35	1.61
Wheels 2 (Wh1-2)	700	0.35	1.61
Wheels 3 (Wh3-4)	700	0.35	1.61
Wheels 4 (Wh3-4)	700	0.35	1.61
Wheel 5 (Wh5)	700	0.35	2.03
Wheel 6 (Wh6)	700	0.35	2.03
Wheel 7 (Wh7)	700	0.35	2.03
Wheel 8 (Wh8)	300	0.15	1.15
Wheel 9 (Wh9)	300	0.15	1.15
Wheel 10 (Wh10)	300	0.15	1.15
Wheel 11 (Wh11)	700	0.35	2.03
Wheel 12 (Wh12)	700	0.35	2.03

The limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (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

The dust collectors and baghouses shall be in operation at all times the blast booths and wheel blast machines are in operation, in order to comply with these limits.

State Rule Applicability – Insignificant Activities

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

The insignificant grinding and machining operations, consisting of the cabinet blast and the four (4) peening blasters, are all exempt from the requirements of 326 IAC 6-3-2, pursuant to 326 IAC 6-3-1(b)(14) because the potential to emit PM from each of these facilities is negligible, less than five hundred fifty-one thousandths (0.551) pounds per hour.

Note: The cabinet blast and peening blasters are totally enclosed units with closed loop recycled systems without any exhaust or outlet air.

State Rule Applicability-Natural Gas Pyrolysis Furnaces A & B:

326 IAC 4-2-2 (Incinerators)

Pursuant to 326 IAC 4-2-2, each of the pyrolysis cleaning furnaces (identified as A, and B) has a maximum solid waste capacity of less than 100 pounds per hour. Each of these three incinerator units shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
- (e) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.
- (f) If any of the requirements of (d)(1) through (d)(5) above are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

The Permittee operating the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

326 IAC 11-6-1 (Hospital/Medical/Infectious Waste Incinerators)

Pursuant to 326 IAC 11-6-1, pyrolysis furnaces are exempt from this rule, and this source does not burn hospital/medical/infectious waste.

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

Pursuant to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits), the Permittee shall not operate the pyrolysis cleaning ovens (identified as units A and B) unless the waste gas stream is burned in one of the following:

- (a) Direct-flame afterburner; or
- (b) Secondary chamber.

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired furnaces are each not subject to 326 IAC 6-2 as they are not sources of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the source-wide furnaces are not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because they each have the potential to emit particulate matter less than 0.551 pounds per hour each.

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

The natural gas fired furnaces are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour each.

State Rule Applicability-Natural Gas Natural Gas space heaters:

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired space heaters, are each not subject to 326 IAC 6-2 as they are not sources of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the source-wide space heaters are not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because they each have the potential to emit particulate matter less than 0.551 pounds per hour each.

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

The space heaters, make-up air units, and furnaces are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour each.

Degreasing Operation

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are

met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 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 2-8-4. 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 compliance monitoring requirements applicable to this source are as follows:

- (a) The existing two blast booths, the new blast booth BB3, and twelve shotblasting lines continue to have applicable compliance monitoring conditions as specified below:

Control ID	Process ID	Parameter	Frequency	Range	Excursions and Exceedances
DC-1	BB1	Pressure Drop	Daily	1.0-4.0	Response Steps
		Visible		Normal-Abnormal	
DC-2	BB2	Pressure Drop	Daily	1.0-4.0	Response Steps
		Visible		Normal-Abnormal	
DC-3	BB3	Pressure Drop	Daily	8-15	Response Steps
WH1-2	Wheel 1 and 2	Pressure Drop	Daily	0.5-2.5	Response Steps
				Normal-Abnormal	
WH3-4	Wheel 3 and 4	Pressure Drop	Daily	0.5-2.5	Response Steps
				Normal-Abnormal	
Wh5, Wh6, Wh7, Wh8, Wh9, Wh10, Wh11 and Wh12	Wheel 5, 6, 7, 8, 9, 10, 11 and 12	Pressure Drop	Daily	0.5-2.5	Response Steps
				Normal-Abnormal	

These monitoring conditions are necessary because the dust collectors for the blast booths, BB1 ,BB2, and BB3, baghouses for Wheel 1 through Wheel 7, Wheels 8, 9,10 11 and Wheel 12, must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP) .

(b) No testing requirement is required based on the existing permit No. 059-17669-00015.

Recommendation

The staff recommends to the Commissioner that the FESOP 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 March 1, 2011. Additional information was received on July 1, 2011.

Conclusion

The operation of this abrasive blasting operation of various material shall be subject to the conditions of the attached FESOP Renewal No. 059-30287-00015.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Swarna Prabha 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) (234-5376) or toll free at 1-800-451-6027 extension (45376).
- (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: Emissions Calculations
SUMMARY OF POTENTIAL TO EMIT CALCULATIONS**

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

Potential to Emit Before Controls (tons/year)

Operation/ Control	PM	*PM-10	PM-2.5	SO2	NOx	VOC	CO	C02e	HAPs
Abrasive Blasting									
Blast Booth 1 (BB1)	25.06	25.06	25.059	0.00	0.00	0.00	0.00	0.00	0.00
Blast Booth 2 (BB2)	36.81	36.81	36.805	0.00	0.00	0.00	0.00	0.00	0.00
Blast Booth 3 (BB3)	25.06	25.06	25.06	0.00	0.00	0.00	0.00	0.00	0.00
Nine (9) Wheels 1,2,3,4,5,6,7,11,12 and three (3) wheels 8,9,10	496.69	496.69	496.69	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	583.62	583.62	583.62	0.00	0.00	0.00	0.00	0.00	0.00
Insignificant Activities									
Grinding and machining-4 Peening Blasters	4.00	4.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
two (2) Pyrolysis Furnaces	0.613	0.613	0.613	0.219	0.263	0.263	0.000	0.00	0.00
** Natural Gas Combustion	0.024	0.097	0.097	0.0076	0.438	0.024	0.368	1533.51627	0.023
Degreaser	0.12	0.12	0.12	0.00	0.00	0.06	0.00	0.00	0.00
Subtotal	4.76	4.83	4.83	0.23	0.70	0.35	0.37	1533.52	0.02
Total	588.4	588.4		0.2	0.7	0.35	0.37		0.02

Limited Emissions (tons/year)

Operation/ Control	PM	*PM-10	PM-2.5	SO2	NOx	VOC	CO	C02e	HAPs
Abrasive Blasting									
Blast Booth 1 (BB1)	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Blast Booth 2 (BB2)	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Blast Booth 3 (BB3)	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Wheels 1 & 2 (Wh1-2)	18	18	18	0.00	0.00	0.00	0.00	0.00	0.00
Wheels 3 & 4 (Wh3-4)	18	18	18	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 5 (Wh5)	8.98	8.98	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 6 (Wh6)	8.98	8.98	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 7 (Wh7)	8.98	8.98	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 8 (Wh8)	4.51	4.51	4.51	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 9 (Wh9)	4.51	4.51	4.51	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 10 (Wh10)	4.51	4.51	4.51	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 11 (Wh11)	8.98	8.98	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 12 (Wh12)	8.98	8.98	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	95.26	95.26	95.26	0	0	0	0	0	0
Insignificant Activities									
Grinding and machining-4 Peening Blasters	0.400	0.400	0.400	0.00	0.00	0.00	0.00	0.00	0.00
two (2) Pyrolysis Furnaces	0.613	0.613	0.613	0.219	0.263	0.263	0.00	0.00	0.00
**Natural Gas Combustion	0.024	0.097	0.097	0.008	1.270	0.070	1.067	1533.516	0.023
Degreaser	0.12	0.12	0.12	0.00	0.00	0.06	0.00	0.00	0.00
Subtotal	1.157	1.230	1.230	0.227	1.533	0.397	1.067	1533.516	0.02
Total	96.42	96.49	96.49	0.23	1.53	0.40	1.07	1533.52	0.02

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

** Combustion Emissions from Pyrolysis furnaces are also included in addition to space heaters.

**Appendix A: Emission Calculations
Abrasive Blasting - Confined BB1**

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

Blast Booth 1 BB1

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
 FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
 D = Density of abrasive (lb/ft3) From Table 2 =
 D1 = Density of sand (lb/ft3) =
 ID = Actual nozzle internal diameter (in) =
 ID1 = Nozzle internal diameter (in) from Table 3 =

354
160
99
0.3125
0.3125

Flow Rate (FR) (lb/hr) = 572.121 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
 FR = Flow Rate (lb/hr) =
 w = fraction of time of wet blasting =
 N = number of nozzles =

0.010
572.121
0
1

Uncontrolled Emissions =	5.72 lb/hr
	25.06 ton/yr
Control Efficiency	99.9%
Controlled Emissions =	0.025 ton/yr

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
 Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
 Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)² x (D/D1)
 E = EF x FR x (1-w/200) x N
 w should be entered in as a whole number (if w is 50%, enter 50)

**Appendix A: Emission Calculations
Abrasive Blasting - Confined BB2**

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

Blast Booth 2 BB2

Calculations PM, PM-10 and PM2.5

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
D = Density of abrasive (lb/ft³) From Table 2 =
D1 = Density of sand (lb/ft³) =
ID = Actual nozzle internal diameter (in) =
ID1 = Nozzle internal diameter (in) from Table 3 =

Worst Case Ceramic

354
235
99
0.3125
0.3125

Flow Rate (FR) (lb/hr) = 840.303 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
FR = Flow Rate (lb/hr) =
w = fraction of time of wet blasting =
N = number of nozzles =

0.010
840.303
0 %
1

Uncontrolled Emissions =	8.40 lb/hr
	36.81 ton/yr
Control Efficiency	99.9%
Controlled Emissions =	0.037 ton/yr

Appendix A: Emission Calculations
Abrasive Blasting - Confined BB3
Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

Blast Booth 3 BB3

Calculations PM, PM-10 and PM2.5

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
 FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
 D = Density of abrasive (lb/ft³) From Table 2 =
 D1 = Density of sand (lb/ft³) =
 ID = Actual nozzle internal diameter (in) =
 ID1 = Nozzle internal diameter (in) from Table 3 =

354
160
99
0.3125
0.3125

Flow Rate (FR) (lb/hr) = 572.121 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
 FR = Flow Rate (lb/hr) =
 w = fraction of time of wet blasting =
 N = number of nozzles =

0.010
572.121
0
1

Uncontrolled Emissions =	5.72 lb/hr
	25.06 ton/yr
Control Efficiency 99.9%	
Controlled Emissions =	0.025 ton/yr

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

Potential Abrasive Usage

Nine (9) Wheel Blast Machines at 400 lbs of abrasive/hour and 3 Wheel Blast Machines at 200 lbs of abrasive/hour

Total throughput (tons/year) = (9 x 400 lbs + 3 x 200 lbs/hr) x 8760 hrs/yr x 1 ton / 2000 lbs = 18396 tons/yr
 36792000 lbs/yr

Uncontrolled Potential to Emit PM and PM10

Process:	Rate Total Throughput (lbs/yr)	Pollutant	*Ef (lbs/1,000 lbs)	Total Emissions Before Control (tons/yr)	Type of control	Control Efficiency (%)	Total Emissions After Control (tons/yr)
Nine (9) Abrasive Blasting Wheel 1,2,3,4,5,6,7,11,12 and three (3) Wheel 8, 9 and 10	36792000	PM	27.0	496.7	Baghouse	98.00%	9.93
		PM-10	27.0	496.7	Baghouse	98.00%	9.93
		PM-2.5	27.0	496.7	Baghouse	98.00%	9.93

Emission factors are from FIRE 6.25 SCC 03-009-002-02

	Abrasive Throughput (lbs/hr)	Ef (lbs/1,000 lbs)	PM Emissions before control (tons/yr)	PM Emissions after Control (lbs/yr)	PM Emissions After Control (lbs/hr)
Wh1-2Bag	800	27.0	94.61	1.89	0.432
Wh3-4Bag	800	27.0	94.61	1.89	0.432
Wh5Bag	400	27.0	47.30	0.95	0.216
Wh6Bag	400	27.0	47.30	0.95	0.216
Wh7Bag	400	27.0	47.30	0.95	0.216
Wh8Bag	200	27.0	23.65	0.47	0.108
Wh9Bag	200	27.0	23.65	0.47	0.108
Wh10Bag	200	27.0	23.65	0.47	0.108
Wh11Bag	400	27.0	47.30	0.95	0.216
Wh12Bag	400	27.0	47.30	0.95	0.216
Total	4200	27.0	496.69	9.93	2.268

Allowable Rate of Emissions

Methodology

Allowable Emissions = 4.10(Process Weight Rate)^0.67

Process	Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)
Blast Booth 1 (BB1-DC)	4144	2.07	6.68
Blast Booth 2 (BB2-DC)	4680	2.34	7.25
Blast Booth 3 (BB3-DC3)	4144	2.07	6.68
Wh1-2Bag	1400	0.70	3.23
Wh3-4Bag	1400	0.70	3.23
Wh5Bag	700	0.35	2.03
Wh6Bag	700	0.35	2.03
Wh7Bag	700	0.35	2.03
Wh8Bag	300	0.15	1.15
Wh9Bag	300	0.15	1.15
Wh10Bag	300	0.15	1.15
Wh11Bag	700	0.35	2.03
Wh12Bag	700	0.35	2.03

**Appendix A: Emission Calculations
Incinerator Emissions
for Pyrolysis furnaces A and B**

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

THROUGHPUT lbs/hr 40

THROUGHPUT
 tons/yr
 175

Emission Factor in lb/ton	POLLUTANT				
	PM	SO2	CO	VOC	NOX
	7.0	2.5	10.0	3.0	3.0
Potential Emissions in ton/yr	0.61	0.219	0.88	0.263	0.263

Methodology

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

Throughput (lb/hr) * 8760 hr/yr * ton/2000 lb = throughput (ton/yr)

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

Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha

4 heating units @ 0.25 million British thermal units per hour/hr each and Pyrolysis furnaces 0.95 MMBTU/hr each

Insignificant Activities
Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

2.90

25,404

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100 **see below	5.50	84.0
Potential Emission in tons/yr	0.024	0.097	0.008	1.270	0.070	1.067

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 7 for HAPs emissions calculations.

HAPs Emissions

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.00210	0.00120	0.07500	1.80000	0.00340
Potential Emission in tons/yr	0.000027	0.000015	0.000953	0.022864	0.000043

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	0.0005	0.0011	0.0014	0.0004	0.0021
Potential Emission in tons/yr	0.000006	0.000014	0.00002	0.000005	0.00003

Methodology is the same as page 6.

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

Greenhouse Gas Emissions

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120000	2.3	2.2
Potential Emission in tons/yr	1524.24	0.0292146	0.0279444
Summed Potential Emissions in tons/yr	1524.297159		
CO2e Total in tons/yr	1533.516271		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Degreasing**

**Company Name: Abrasive Processing and Technologies
Address City IN Zip: 712 East Ohio Street, Fortville, Indiana 46040
FESOP Renewal: F 059-30287-00015
Reviewer: Swarna Prabha**

Material	Density (lbs/gal)	Maximum Usage (gal/yr)	Weight % VOC	PTE VOC (tons/yr)	Weight solids%	PTE PM/PM10 tons/yr
H2-D2 solvent	8.92	145	10%	0.06	19%	0.12

0.06

0.12

Note:

As a worst-case scenario, the calculations above assume a solvent usage rate of 145 gallons per year for the solvent cleaning process.

Methodology

PTE VOC (tons/yr) = Density (lbs/gal) x Maximum Usage (gal/yr) x Weight % VOC or HAP x 1 ton/2,000 lbs



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Terry Warrum
Abrasive Processing & Technologies
P.O. Box 250
712 East Ohio St
Fortville, IN 46040

DATE: September 28, 2011

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

SUBJECT: Final Decision
FESOP
059-30287-00015

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
Mack Overton (Astbury Environmental Engineering)
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



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

September 28, 2011

TO: Fortville Vernon Township Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Abrasive Processing & Technologies
Permit Number: 059-30287-00015

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 9/28/2011 Abrasive Processing and Technologies (APT) 059-30287-00015 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	 Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Terry Warrum Abrasive Processing and Technologies (APT) PO Box 250, 712 East Ohio St Fortville IN 46040-0250 (Source CAATS) via confirm delivery										
2		Fortville Vernon Twp Public 625 E Broadway Fortville IN 46040-1549 (Library)										
3		Hancock County Commissioners 111 American Legion #219 Greenfield IN 46140 (Local Official)										
4		Hancock County Health Department 111 America Legion Greenfield IN 46140-2365 (Health Department)										
5		Mr. Mack Overton Astbury Environmental Engineering 5757 W 74th Street Indianapolis IN 46278 (Consultant)										
6		Timothy Scroggins 3171 W 1000 N Fortville IN 46040 (Affected Party)										
7		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
8												
9												
10												
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender 6	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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