



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: July 5, 2006
RE: international Melting and Mfg / 091-22313-00133
FROM: Nisha Sizemore
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, Room 1049, 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.dot 1/10/05



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Indianapolis, Indiana 46204-2251
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**NEW CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
(Minor PSD/EO)
OFFICE OF AIR QUALITY**

**International Melting & Manufacturing, LLC
Highway 39
LaPorte, Indiana 46352**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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

Operation Permit No.: MSOP 091-22313-00133	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: July 5, 2006 Expiration Date: July 5, 2011

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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 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary recycled abrasive blasting material manufacturing plant.

Authorized Individual:	CEO
Source Address:	Highway 39, LaPorte, Indiana 46352
Mailing Address:	525 SW Camden Avenue, Stuart, Florida 34994
General Source Phone:	(419) 535-3586
SIC Code:	3479
County Location:	LaPorte County
Source Location Status:	Nonattainment area for ozone under the 8-hour standard Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not in 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) Material processing facilities with a combined maximum throughput rate of 16,668 pounds per hour of (Electric Arc Furnace) dust, cullet and foundry-sand, consisting of the following units installed in 2006:
- (1) Cullet & foundry-sand receiving stations by bulk trucks, and EAF receiving station by bulk truck/rail car;
 - (2) Cullet & foundry-sand storage areas;
 - (3) EAF dust storage bin (identified as EAFB-1), with emissions controlled by a dry fabric filter (identified as DC-1);
 - (4) Cullet storage bin (identified as CB-1), with emissions controlled by a dry fabric filter (identified as DC-2);
 - (5) Foundry-sand storage bin (identified as FSB-1), with emissions controlled by a dry fabric filter (identified as DC-3);
 - (6) Four (4) mix batch bins (identified as MBB-1 through MBB-4), with emissions controlled by a dry fabric filter (identified as DC-4);
 - (7) Screw augur conveyance from four (4) mix batch bins to melter charge hoppers (identified as FCH-1 and FCH-2);
 - (8) Two (2) natural gas-fired submerged combustion melters (identified as SCM-1 and SCM-2) with emissions exhausting at stacks SCM-1 and SCM-2;

- (9) One (1) quenching and drying operation, exhausting at steam vents SV-1 and SV-2; and
 - (10) One (1) crushing, screening and bagging line (identified as CSBL-1), with emissions controlled by a dry fabric filter (identified as DC-5).
- (b) Four (4) natural gas-fired space heaters, with a maximum combined heat input capacity of 1.25 MMBtu per hour. These units will be installed in 2006.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

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

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

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5] [IC13-15-3-6(a)]

- (a) This permit is issued for a fixed term of five (5) 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.5 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.6 Enforceability

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

B.7 Severability

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

B.8 Property Rights or Exclusive Privilege

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

B.9 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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.10 Certification

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

B.11 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

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

B.12 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) after issuance of this permit, 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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) All terms and conditions of permits established prior to and issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.15 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality

100 North Senate Avenue
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 2-6.1 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.16 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
- Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 2-6.1-6(d)]

B.17 Source Modification Requirement

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

B.18 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2] [IC 13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

- (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 processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (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.19 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6-1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "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 2-6.1-6(d)(3)]

B.20 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.21 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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.5 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

C.6 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
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 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 Accredited 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 Accredited Asbestos Inspector to

thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.7 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
- (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 the 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.8 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

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

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

C.10 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

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

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

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall have a scale such that the expected normal reading 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.

C.12 Response to Excursions or Exceedances

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

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to non-compliant stack tests.

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(c)(2)] [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the attached Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-5] [IC 13-14-1-13]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-6.1-5(a)(1)]:

- (a) Material processing facilities with a combined maximum throughput rate of 16,668 pounds per hour of Electric Arc Furnace (EAF) dust, cullet and foundry-sand, consisting of the following units installed in 2006:
- (1) Cullet & foundry-sand receiving stations by bulk trucks, and EAF receiving station by bulk truck/rail car;
 - (2) Cullet & foundry-sand storage areas;
 - (3) EAF dust storage bin (identified as EAFB-1), with emissions controlled by a dry fabric filter (identified as DC-1);
 - (4) Cullet storage bin (identified as CB-1), with emissions controlled by a dry fabric filter (identified as DC-2);
 - (5) Foundry-sand storage bin (identified as FSB-1), with emissions controlled by a dry fabric filter (identified as DC-3);
 - (6) Four (4) mix batch bins (identified as MBB-1 through MBB-4), with emissions controlled by a dry fabric filter (identified as DC-4);
 - (7) Screw augur conveyance from four (4) mix batch bins to melter charge hoppers (identified as FCH-1 and FCH-2);
 - (8) Two (2) natural gas-fired submerged combustion melters (identified as SCM-1 and SCM-2) with emissions exhausting at stacks SCM-1 and SCM-2;
 - (9) One (1) quenching and drying operation, exhausting at steam vents SV-1 and SV-2; and
 - (10) One (1) crushing, screening and bagging line (identified as CSBL-1), with emissions controlled by a dry fabric filter (identified as DC-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 2-6.1-5(a)(1)]

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from material processing facilities (storage, unloading, loading, transfer) shall not exceed the pounds per hour limitations as shown in the table below.

Process Description	Control Device ID	Process Weight Rule		PM Emission Rate (lbs/hour)
		(lbs/hour)	Tons/hour	
EAF Dust transfer to storage bin – EAF B1	DC-1	10,000	5.00	12.1
Cullet unloading to storage area	None	3,334	1.67	5.77
Cullet loading to conveyor	None	3,334	1.67	5.77
Cullet transfer to storage bin CB-1	DC-2	3,334	1.67	5.77

Process Description	Control Device ID	Process Weight Rule		PM Emission Rate (lbs/hour)
		(lbs/hour)	Tons/hour	
Foundry sand unloading to storage area	None	3,334	1.67	5.77
Foundry sand loading to conveyor	None	3,334	1.67	5.77
Foundry sand transfer to storage bin FSB-1	DC-3	3,334	1.67	5.77
Transfer of EAF, Cullet, Foundry Sand from storage bins to mixing batch bins MBB-1 through MBB-4	DC-4	16,668	8.33	17.0
Crushing, Screening, & Bagging Line CSB L-1	DC-5	16,668	8.33	17.0
Two (2) Submerged Combustion Melters	None	16,668	8.33	17.0

The pounds per hour limitations were calculated as follows:

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

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

Where

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

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

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

Compliance Determination Requirements

D.1.3 Particulate Control

- (a) In order to comply with Condition D.1.1, the dry fabric filters (DC-1 through DC-5) for particulate control shall be in operation and control emissions from the material processing facilities at all times that the material processing facilities are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Visible Emissions Notations

- (a) Visible emission notations of the material processing facilities exhaust shall be performed once per day 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 steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.5 Parametric Monitoring

The Permittee shall record the pressure drop across the dry fabric filters (DC-1 through DC-5) used in conjunction with the material processing facilities, at least once per day when the process is in operation. When for any one reading, the pressure drop across the dry fabric filter is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances 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 at least once every six (6) months.

D.1.6 Broken or Failed Bag Detection

- (a) For a single compartment baghouse 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.
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed 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 emissions unit.

Bag failure can be indicated by a significant drop in the baghouse=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 Requirement

D.1.7 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of visible emission notations of the material processing facilities exhaust once per day.
- (b) To document compliance with Condition D.1.5, the Permittee shall maintain records once per day of the pressure drop during normal operation.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

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

Company Name:	International Melting & Manufacturing, LLC
Address:	Highway 39
City:	LaPorte, Indiana 46352
Phone #:	(419) 535-3586
MSOP #:	091-22313-00133

I hereby certify that International Melting & Manufacturing, LLC is still in operation.
 no longer in operation.

I hereby certify that International Melting & Manufacturing, LLC is in compliance with the requirements of MSOP 091-22313-00133.
 not in compliance with the requirements of MSOP 091-22313-00133.

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

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

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-6865**

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

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

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

Source Background and Description

Source Name:	International Melting & Manufacturing, LLC
Source Location:	Highway 39, LaPorte, Indiana 46352
County:	LaPorte
SIC Code:	3479
Operation Permit No.:	091-22313-00133
Permit Reviewer:	ERG/SD

On April 29, 2006 the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) had a notice published in The LaPorte Herald – Argus, LaPorte, Indiana, stating that International Melting & Manufacturing, LLC, had applied for a New Source Construction and Minor Source Operating Permit to operate a stationary recycled abrasive blasting material manufacturing plant. The notice also stated that IDEM, OAQ proposed to issue a 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.

On May 8, 2006, International Melting & Manufacturing, LLC submitted comments on the proposed permit. The summary of the comments and responses are shown below. Deleted text is shown in ~~strikeout~~ and new text is shown in **bold**. The Table of Contents has been updated accordingly.

Comment 1:

The Permittee requested clarification on the potential to emit of PM10 from material handling operations, specifically the collection devices DC-1 through DC-5, to ascertain whether the calculations were based on the rated design efficiency of the collectors or on AP-42 emission factors.

Response to Comment 1:

The potential to emit of PM10 from the material handling operations, which specifically have collection devices DC-1 through DC-5, are based on the rated design efficiency of the collectors as provided by the Permittee. For the material handling operations that are uncontrolled, the potential to emit of PM10 was estimated using AP-42 emission factors as follows: Maximum throughput (lbs/hour) * Emission factor (lbs/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs. The emission factor was from AP-42, Chapter 13.2.4 – Aggregate Handling and Storage Area. On June 12, 2006, the Permittee submitted a laboratory analysis of the moisture content of the cullet used at the source. Based on this analysis, the moisture content for the cullet is equal to 2.57 percent. Based on the revised calculations, the potential to emit of PM and PM10 for cullet unloading to the storage area and cullet loading to the conveyor is equal to 0.98 tons per year. Revised calculations for the entire source are shown under Response to Comment 2.

Comment 2:

The Permittee has submitted test results of the pilot testing conducted for the two (2) proposed submerged combustion melting furnaces. The testing was conducted on a prototype furnace and the results indicate that the emission rate is higher than that calculated using the AP-42 emission factor. Condition D.1.1 should be revised to include the particulate limit for the submerged combustion melting furnaces and the entry in the table for the storage bins should be revised to indicate there are four storage bins (MBB-1 through MBB-4).

Response to Comment 2:

The test results provided by the Permittee indicate a particulate emission rate equivalent to 5.46 pounds per hour (or 23.9 tons per year per melter), while the AP-42 emission factor for PM/PM10 from Chapter 11.19, Table 11.19.1-1 (SCC # 3-05-027-60) estimates particulate emission rate equivalent to 0.02 tons per year for the two melters. IDEM, OAQ has updated the potential to emit calculations for the entire source as shown in the table below and also revised Condition D.1.1. Based on the potential to emit calculations, the two (2) submerged combustion melters are in compliance with the provisions of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Furthermore, Condition D.1.1 was revised to include all four (4) storage bins under the transfer operations, i.e. MBB-1, MBB-2, MBB-3 and MBB-4.

Emission/Process unit	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	NO _x	VOC	CO	HAPs
Natural Gas Fired Space Heaters	0.01	0.04	3.22E-03	0.54	0.03	0.45	1.01E-02
Material Handling Operations (loading, unloading, and transfer)	65.9 41.5	65.9 41.5	0.0	0.0	0.0	0.0	0.0
Natural Gas Combustion	0.39	1.57	0.12	20.6	1.13	17.3	3.88E-01
Two (2) submerged Combustion Melters	0.02 47.8	0.02 47.8	0.0	0.0	2.63	0.0	*3.72
Total	66.4 89.7	67.6 90.9	0.13	21.1	3.79	17.8	4.12

* The sum consists of metal and organic HAPs.

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from material processing facilities (storage, unloading, loading, transfer) shall not exceed the pounds per hour limitations as shown in the table below.

Process Description	Control Device ID	Process Weight Rule		PM Emission Rate (lbs/hour)
		(lbs/hour)	Tons/hour	
EAF Dust transfer to storage bin – EAF B1	DC-1	10,000	5.00	12.1
Cullet unloading to storage area	None	3,334	1.67	5.77
Cullet loading to conveyor	None	3,334	1.67	5.77
Cullet transfer to storage bin CB-1	DC-2	3,334	1.67	5.77
Foundry sand unloading to storage area	None	3,334	1.67	5.77
Foundry sand loading to conveyor	None	3,334	1.67	5.77

Process Description	Control Device ID	Process Weight Rule		PM Emission Rate (lbs/hour)
		(lbs/hour)	Tons/hour	
Foundry sand transfer to storage bin FSB-1	DC-3	3,334	1.67	5.77
Transfer of EAF, Cullet, Foundry Sand from storage bins to mixing batch bins MBB-1 through MBB-4	DC-4	16,668	8.33	17.0
Crushing, Screening, & Bagging Line CSB L-1	DC-5	16,668	8.33	17.0
Two (2) Submerged Combustion Melters	None	16,668	8.33	17.0

The pounds per hour limitations were calculated as follows:

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

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

Where

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

Upon further review IDEM, OAQ has revised the following conditions as shown.

1. Condition C.1 under Table of Contents was revised from "Particulate Emission Limitation" to "Particulate Emission Limitations". Furthermore, the table of contents was revised to add Condition D.1.3 – Particulate Control to correctly reflect Section D conditions.
2. Condition B.12 – Preventive Maintenance Plan was revised as shown.

B.12 Preventive Maintenance Plan [326 IAC 1-6-3]

...

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

...

3. Condition B.15 – Deviations from Permit Requirements and Conditions was deleted from the permit as shown.

~~B.15 Deviations from Permit Requirements and Conditions~~

- ~~(a) Deviations from any permit requirements (for emergencies see Section B – Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:~~

~~Indiana Department of Environmental Management
 Compliance Data Section, Office of Air Quality
 100 North Senate Avenue
 Indianapolis, Indiana 46204-2254~~

~~using the attached Quarterly Deviation and Compliance Monitoring Report, or its~~

~~equivalent. 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.~~

~~The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

~~(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.~~

4. The rule citation in Condition B.20 – Transfer of Ownership or Operation was corrected from 326 IAC 2-6.1-6 to 326 IAC 2-6.1-6(d)(3), as shown.

B.20 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

5. Condition C.6 – Asbestos Abatement Projects was revised as shown.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

...

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC ~~2-7-4(34)~~ **2-1.1-1(1)**.

...

(f) Demolition and ~~Renovation~~

6. Item (c) in Condition C.7 – Performance Testing was revised to remove reference to the local agency, since there is no local agency associated with this source.

C.7 Performance Testing [326 IAC 3-6]

...

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ ~~(and local agency)~~ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, ~~(and local agency)~~, 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.

7. The rule citation in the last paragraph of Condition C.13 – Actions Related to Noncompliance Demonstrated by a Stack Test, was revised from 326 IAC 2-1.1-1 to 326 IAC 2-1.1-1(1).

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

....

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

8. Under Section C, the rule citation was added to the Record Keeping and Reporting Requirements heading as shown below.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(c)(2)] [326 IAC 2-6.1-5(a)(2)]

9. Condition C.14 was revised as shown, and the Malfunctions Report was updated.

C.14 Malfunctions Report [326 IAC 1-6-2]

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

...

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the **attached** Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

...

10. The fax number in the Malfunction Report has been changed as follows:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-~~5967~~6865**

....

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

**Technical Support Document (TSD) for a New Source Construction
and Minor Source Operating Permit**

Source Background and Description

Source Name:	International Melting & Manufacturing, LLC
Source Location:	Highway 39, LaPorte, Indiana 46352
County:	LaPorte
SIC Code:	3291
Operation Permit No.:	091-22313-00133
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from International Melting & Manufacturing, LLC relating to the construction and operation of a stationary recycled abrasive blasting material manufacturing plant.

New Emission Units and Pollution Control Equipment

The source consists of the following new emission units and pollution control devices:

- (a) Material processing facilities with a combined maximum throughput rate of 16,668 pounds per hour of Electric Arc Furnace (EAF) dust, cullet and foundry-sand, consisting of the following units installed in 2006:
- (1) Cullet & foundry-sand receiving stations by bulk trucks, and EAF receiving station by bulk truck/rail car;
 - (2) Cullet & foundry-sand storage areas;
 - (3) EAF dust storage bin (identified as EAFB-1), with emissions controlled by a dry fabric filter (identified as DC-1);
 - (4) Cullet storage bin (identified as CB-1), with emissions controlled by a dry fabric filter (identified as DC-2);
 - (5) Foundry-sand storage bin (identified as FSB-1), with emissions controlled by a dry fabric filter (identified as DC-3);
 - (6) Four (4) mix batch bins (identified as MBB-1 through MBB-4), with emissions controlled by a dry fabric filter (identified as DC-4);
 - (7) Screw auger conveyance from four (4) mix batch bins to melter charge hoppers (identified as FCH-1 and FCH-2);
 - (8) Two (2) natural gas-fired submerged combustion melters (identified as SCM-1 and SCM-2) with emissions exhausting at stacks SCM-1 and SCM-2;
 - (9) One (1) quenching and drying operation, exhausting at steam vents SV-1 and SV-2; and
 - (10) One (1) crushing, screening and bagging line (identified as CSBL-1), with emissions controlled by a dry fabric filter (identified as DC-5).

- (b) Four (4) natural gas-fired space heaters, with a maximum combined heat input capacity of 1.25 MMBtu per hour. These units will be installed in 2006.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Existing Approvals

There are no existing approvals issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
SMC-1	Submerged combustion melter	50 inches	2.0	18,523	400
SMC-2	Submerged combustion melter	50 inches	2.0	18,523	400

Recommendation

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

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 28, 2005, with additional submitted by the applicant on December 15, 2005.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Appendix A, pages 1 through 8).

Potential to Emit of the Source Before Controls

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

Pollutant	Potential to Emit (tons/year)
PM	66.4
PM10	67.6
SO ₂	0.13
VOC	3.79
CO	17.8
NO _x	21.1

HAPs	Potential to Emit (tons/year)
Benzene	4.44E-04
Dichlorobenzene	2.54E-04
Formaldehyde	1.59E-02
Hexane	3.81E-01

HAPs	Potential to Emit (tons/year)
Toluene	7.19E-04
Lead	1.62E-01
Cadmium	6.99E-03
Chromium	1.02E-01
Manganese	1.49
Nickel	1.29E-02
Arsenic	1.42E-03
Phenols	2.63
Total	4.81

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 100 tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 are greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A MSOP will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7 (Part 70 Permit Program).
- (c) **Fugitive Emissions**
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability. See the Federal Rule Applicability section for discussion of why this source is not a secondary metal production plant.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO ₂	Maintenance
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) LaPorte County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) emissions and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.
- (c) LaPorte County has been classified as attainment in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of

Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

Source Status

Pollutant	Emissions (tons/year)
PM	66.4
PM10	67.6
SO ₂	0.13
VOC	3.79
CO	17.8
NO _x	21.1
Single HAP	<10
Combination HAPs	<25

- (a) This new source is not a major stationary source because no regulated pollutant (under PSD) is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This new source is not a major stationary source because no regulated pollutant (under Emission Offset) is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) The source status is based on the potential to emit calculations for the source (see Appendix A).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) The provisions of 40 CFR 60, Subpart AAa – New Source Performance Standard for Steel Plants are not included in this permit for the source because this source does not meet the applicability criteria listed under 40 CFR 60.270a.
- (b) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.
- (c) Although this source processes materials containing a significant amount of metal (36 % iron, 20% zinc, 0.37 % aluminum), this operation is not considered a secondary metal production plant. According to AP-42, Section 12, secondary metal production refers to production of alloys from ingots and to recovery of metal from scrap and salvage. The processes at the source do not produce alloys or refine the metal. In fact, sand and cullet are mixed with the metal containing EAF dust and dilutes the metal content. Therefore, it is not 1 of the 28 source categories and the provisions of 40 CFR 63, Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production were not included in this permit for the source.

- (d) The provisions of 40 CFR 63, Subpart EEEEE - National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries are not included in this permit for the source because it is not a major source of HAP emissions and it is not an iron and steel foundry.
- (e) The provisions of 40 CFR 63, Subpart XXX - National Emission Standards for Ferromanganese and Silicomanganese Production are not included in this permit for the source because it is not a major source of HAP emissions and does not engage in ferromanganese and silicomanganese production.
- (f) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) included in this permit for this source.

State Rule Applicability – Entire Source

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

International Melting & Manufacturing, LLC will construct a new plant in LaPorte, Indiana in 2006. The new plant does not belong to one (1) of the twenty-eight (28) source categories. The potential to emit of each regulated pollutant before control is less than two hundred and fifty (250) tons per year PSD threshold (see Appendix A). Therefore, the source is a minor source under PSD and the provisions of 326 IAC 2-2 do not apply.

3216 IAC 2-3 (Emission Offset)

This source will be constructed in 2006 and the potential to emit of VOC and NOx are less than one hundred (100) tons per year (see Appendix A). Therefore, the source is a minor source under emission offset and the provisions of 326 IAC 2-3 do not apply.

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

The potential to emit of HAPs from the operation of this stationary abrasive blasting material manufacturing plant is less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the provisions of 326 IAC 2-4.1 do not apply.

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 under 326 IAC 2-7 (Part 70 Permit Program); it is not located in Lake or Porter County; and it does not emit equal to or greater than 5 tons per year of lead. Therefore, the provisions of 326 IAC 2-6 do not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in 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 6-4 (Fugitive Dust Emissions)

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).

326 IAC 6-5.1 (Fugitive Dust Particulate Matter Emission Limitation)

Although constructed after 1985 and requiring a permit under 325 IAC 2-6.1, this source is not subject to the requirements of 326 IAC 6-5 because the only source of fugitive emissions are from paved roads and the potential fugitive emissions from the roads are negligible.

State Rule Applicability – Material Processing Facilities (Unloading, Loading and Transfer)

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions rate from material processing facilities (storage, unloading, loading, transfer) shall not exceed the pounds per hour limitations as shown in the table below.

Process Description	Control Device ID	Process Weight Rule		PM Emission Rate (lbs/hour)
		(lbs/hour)	Tons/hour	
EAF Dust transfer to storage bin – EAF B1	DC-1	10,000	5.00	12.1
Cullet unloading to storage area	None	3,334	1.67	5.77
Cullet loading to conveyor	None	3,334	1.67	5.77
Cullet transfer to storage bin CB-1	DC-2	3,334	1.67	5.77
Foundry sand unloading to storage area	None	3,334	1.67	5.77
Foundry sand loading to conveyor	None	3,334	1.67	5.77
Foundry sand transfer to storage bin FSB-1	DC-3	3,334	1.67	5.77
Transfer of EAF, Cullet, Foundry Sand from storage bins to mixing batch bins MBB-1	DC-4	16,668	8.33	17.0
Crushing, Screening, & Bagging Line CSB L-1	DC-5	16,668	8.33	17.0

The pounds per hour limitations were calculated as follows:

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:

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

The dry fabric filters (DC-1 through DC-5) for particulate control shall be in operation and control emissions from the material processing facilities at all times when the material processing facilities are in operation in order to comply with this rule.

(b) The provisions of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) are not applicable to the natural gas-fired submerged combustion melters because according to 326 IAC 6-3-2 (b)(14) manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the provisions of this rule.

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

The provisions of 326 IAC 8-1-6 do not apply to this source because the potential VOC emissions from material processing facilities are less than 25 tons per year.

State Rule Applicability – Space Heaters

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

The natural gas-fired space heaters are not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the particulate emissions from these units are less than 0.551 pounds per hour and are not considered a manufacturing process. Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the 326 IAC 6-3-2 limitations.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The natural gas-fired space heaters are not subject to the provisions of 326 IAC 6-2-4 (Emission Limitations for Sources of Indirect Heating) because these units are not sources of indirect heating.

The compliance monitoring requirements applicable to the source are as follows:

Visible Emissions Notations

- (a) Visible emission notations of the material processing facilities exhaust shall be performed once per day 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 steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

Parametric Monitoring

- (f) The Permittee shall record the pressure drop across the dry fabric filters (DC-1 through DC-5) used in conjunction with the material processing facilities, at least once per day when the process is in operation. When for any one reading, the pressure drop across the dry fabric filter is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (g) 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 at least once every six (6) months.

Broken or Failed Bag Detection

- (h) For a single compartment baghouse 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.

- (i) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed 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 emissions unit.
- (j) Bag failure can be indicated by a significant drop in the baghouse'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.

Conclusion

The construction and operation of this stationary abrasive blasting material manufacturing plant shall be subject to the conditions of the New Source Construction and Minor Source Operating Permit 091-22313-00133.

**Appendix A: Emission Calculations
Natural Gas Combustion
Space Heaters**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Plt ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

Heat Input Capacity
MMBtu/hour

Potential Throughput
MMSCF/year

1.25 (Total of 4 units)

10.7

Emission Factor (lb/MMSCF)	Pollutant					
	* PM	* PM10	SO ₂	** NO _x	VOC	CO
Potential To Emit (tons/year)	1.9	7.6	0.6	100	5.5	84.0
	0.01	0.04	3.22E-03	0.54	0.03	0.45

* PM emission factor is filterable PM only; and PM10 emission factor is filterable and condensable PM and PM10 combined.

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

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

METHODOLOGY

Potential throughput (MMSCF/year) = Heat input capacity (MMBtu/hour) * 8760 hours/year * 1 MMSCF/1020 MMBtu

PTE (tons/year) = Potential throughput (MMSCF/year) * Emission factor (lb/MMSCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion
Space Heaters

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Pit ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

HAPs - Organics

Emission Factor (lb/MMSCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	1.13E-05	6.44E-06	4.03E-04	9.66E-03	1.83E-05

HAPs - Metals

Emission Factor (lb/MMSCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	2.68E-06	5.90E-06	7.51E-06	2.04E-06	1.13E-05

Methodology is the same as previous page.

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

**Appendix A: Emission Calculations
Material Processing**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Pit ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

No.	Process Description	Maximum Throughput Rate (lbs/hour)	Control Device ID	Emission Factor Reference	* Emission Factor (lb/ton)	** PTE of PM/PM10 (tons/year)
1	EAF dust transfer to storage bin - EAF B-1	10,000	DC-1			See next page
2	Cullet unloading to storage area	3,334	none	AP-42, Chapter 13.2.4	1.74	12.7
3	Cullet loading to conveyor	3,334	none	AP-42, Chapter 13.2.4	1.74	12.7
4	Cullet transfer to storage bin CB-1	3,334	DC-2			
5	Foundry sand unloading to storage area	3,334	none	AP-42, Chapter 13.2.4	1.74	12.7
6	Foundry sand loading to conveyor	3,334	none	AP-42, Chapter 13.2.4	1.74	12.7
7	Foundry sand transfer to storage bin FS B-1	3,334	DC-3			See next page
8	Transfer of the following products from storage bins to mixing batch bins MBB-1 :					
8(a)	EAF	10,000	DC-4			See next page
8(b)	Cullet/Foundry Sand	6,668	DC-4			See next page
9	Crushing, Screening, & Bagging Line CSB L-1	16,668	DC-5			See next page
Total Particulate in tons per year =					50.9	

Control type: Dry Fabric Filters

** Assume all PM emissions are equal to PM10 emissions.

Emission factors are AP-42, Chapter 13.2.4 and calculated as shown below.

* Emission Factor in lb/ton = $k \cdot (0.0032) \cdot [(U/5)^{1.3} \cdot 1/(M/2)^{1.4}]$

K = particle size multiplier 0.74

U = mean wind speed, m/sec 0.60

M = material moisture content 0.25%

E.F (lb/ton) = 1.74

METHODOLOGY

PTE PM/PM10 (tons/year) = Maximum throughput rate (lbs/hour) * Emission factor (lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs

**Appendix A: Emission Calculations
Material Processing**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Plt ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

Process Description	Control ID	Control Type	Outlet Grain Loading (gr/acf)	Air Flow Rate (acf/min)	Control Efficiency (%)	PTE of PM/PM10 After Control (tons/year)	PTE of PM/PM10 Before Control (tons/year)
EAF dust transfer to storage bin - EAF B-1	DC-1	Dry Fabric Filters	0.001	800	99%	0.030	3.00
Cullet transfer to storage bin CB-1	DC-2		0.001	800	99%	0.030	3.00
Foundry sand transfer to storage bin FS B-1	DC-3		0.001	800	99%	0.030	3.00
Transfer of products from storage bins to mixing batch bins MBB-1	DC-4		0.001	800	99%	0.030	3.00
Crushing, Screening, & Bagging Line CSB L-1	DC-5		0.001	800	99%	0.030	3.00

Total PTE of PM/PM10 in tons per year = 15.0

Assume all PM emissions are equal to PM10

METHODOLOGY

After Control Potential To Emit PM/PM10 (tons/year) = Outlet grain loading (gr/acf) * Air flow rate (acf/minute) * 60 minutes/hour * 1 lb/7000 gr * 8760 hours/year * 1 ton/2000 lbs

Before Control Potential To Emit PM/PM10 (tons/year) = Outlet grain loading (gr/acf) * Air flow rate (acf/minute) * 60 minutes/hour * 1 lb/7000 gr * 8760 hours/year * 1 ton/2000 lbs * (1- Control Efficiency %)

**Appendix A: Emission Calculations
Natural Gas Combustion
Two (2) Submerged Combustion Melters**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Plt ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

Heat Input Capacity
MMBtu/hour

Potential Throughput
MMSCF/year

48.0

412

	Pollutant					
	* PM	* PM10	SO ₂	** NO _x	VOC	CO
Emission Factor (lb/MMSCF)	1.9	7.6	0.6	100	5.5	84.0
Potential To Emit (tons/year)	0.39	1.57	0.12	20.6	1.13	17.3

* PM emission factor is filterable PM only; and PM10 emission factor is filterable and condensable PM and PM10 combined.

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

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

METHODOLOGY

Potential throughput (MMSCF/year) = Heat input capacity (MMBtu/hour) * 8760 hours/year * 1 MMSCF/1020 MMBtu

PTE (tons/year) = Potential throughput (MMSCF/year) * Emission factor (lb/MMSCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations
Natural Gas Combustion
Two (2) Submerged Combustion Melters**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Plt ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

HAPs - Organics

Emission Factor (lb/MMSCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	4.33E-04	2.47E-04	1.55E-02	3.71E-01	7.01E-04

HAPs - Metals

Emission Factor (lb/MMSCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	1.03E-04	2.27E-04	2.89E-04	7.83E-05	4.33E-04

Methodology is the same as previous page.

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

Appendix A: Emission Calculations
Two (2) Submerged Combustion Melters

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Pit ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

A. Foundry Sand

The foundry sand contains three percent (3%) by weight of binding resins, which contains thirty percent (30 %) phenolic resins as obtained from MSDS provided by the Permittee. The foundry sand will be combusted in a high temperature furnace at an estimated destruction efficiency of ninety-eight percent (98%), releasing phenolic compounds as shown in the calculation below.

The maximum throughput rate of foundry sand is equal to 3,334 lbs per hour.

Emission factor for PM/PM10 was estimated using emission factor from AP-42, Chapter 11.19, Table 11.19.1-1, SCC # 3-05-027-60.

METHODOLOGY

Emission Rate of VOC/HAP (lb/hour) = Weight % binder * Max. weight % phenols in binder * Max. throughput rate of foundry sand (lb/hour) * (1-destruction efficiency %) **0.60**

PTE of VOC/HAP (tons/year) = Emission rate (lbs/hour) * 8760 hours/year * 1 ton/2000 lbs **2.63**

PTE of PM/PM10 (tons/year) = Max. throughput rate of foundry sand (lbs/hour) * Emission Factor (0.0013 lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs **0.009**

B. EAF Dust/Cullet

Emission factor for PM/PM10 was estimated using emission factor from AP-42, Chapter 11.19, Table 11.19.1-1, SCC # 3-05-027-60.

EAF dust and cullet contains HAPs such as Arsenic, Cadmium, Chromium, Lead, Manganese, and Nickel as follows:

Potential to Emit of Particulate (tons/year) = **66.0**

Weight % Arsenic	Weight % Cadium	Weight % Chromium	Weight % Lead	Weight % Manganese	Weight % Nickel
0.002%	0.01%	0.15%	0.24%	2.21%	0.02%

Potential To Emit of HAPs (tons/year)

Arsenic	Cadium	Chromium	Lead	Manganese	Nickel
1.39E-03	6.60E-03	9.89E-02	1.58E-01	1.46E+00	1.22E-02

METHODOLOGY

PTE of HAPs (tons/year) = Particulate emissions (tons/year) * Weight % HAPs.

PTE of PM/PM10 (tons/year) = Max. throughput rate of EAF dust/cullet (lbs/hour) * Emission Factor (0.0013 lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs **0.009**

**Appendix A: Emission Calculations
SUMMARY**

Company Name: International Melting & Manufacturing, LLC
Address: Highway 39, La Porte, Indiana 46352
MSOP: 091-22313
Plt ID: 091-00133
Reviewer: ERG/SD
Date: April 18, 2006

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Unit	PM	PM10	SO₂	NO_x	VOC	CO	HAPs
Space Heaters	0.01	0.04	0.00	0.54	0.03	0.45	1.01E-02
Raw Material Processing	66.0	66.0	0.0	0.0	0.0	0.0	0.0
NG Combustion in Two (2) Melters	0.39	1.57	0.12	20.6	1.13	17.3	3.88E-01
Two (2) Melters	0.02	0.02			2.63		4.36
	66.4	67.6	0.13	21.1	3.79	17.8	4.76