**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: July 12, 2011

RE: Melt Solutions / 053-30100-00071

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 Construction and Minor Source Operating Permit
# OFFICE OF AIR QUALITY

## Melt Solutions
## 201 East Charles Street
## Marion, Indiana 46952

(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.

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.: M053-30100-00071 | |
|---|---|
| Issued by:<br><br>Iryn Calilung, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: July 12, 2011<br><br>Expiration Date: July 12, 2016 |

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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 brick recycling operation to produce fluxes, tap sands and briquettes.

| | |
|---|---|
| Source Address: | 201 East Charles Street, Marion, Indiana 46952 |
| General Source Phone Number: | 765-668-0101 |
| SIC Code: | 3241 |
| County Location: | Grant |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Minor Source Operating Permit Program<br>Minor Source, under PSD and Emission Offset Rules<br>Minor Source, Section 112 of the Clean Air Act<br>Not 1 of 28 Source Categories |

### A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) flux production line, constructed in 2007, consisting of a charge bin, cement mixer and a bag stand and transfer operation, with a maximum capacity of 8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(b) One (1) SWECO Line, constructed in 2007, consisting of a SWECO screen, conveyor, and hopper loading stations, with a maximum capacity of 4 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the SWECO Line is considered an affected facility.

(c) One (1) CrushTech 1348J mobile crusher, constructed in 2007, with a maximum capacity of 200 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the CrushTech 1348J mobile crusher is considered an affected facility.

(d) One (1) Screen Line, constructed in 2008, consisting of a vibratory feeder and a trommel screen, with a maximum capacity of 15 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the Screen Line is considered an affected facility.

(e) One (1) Tap Mix Line, constructed in 2008, consisting of a hopper loading station and transfer operation, with a maximum capacity of 12 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(f) One (1) Briquette Line, constructed in 2008, consisting of one mixer, one briquette machine, and transfer operation, with a maximum capacity of 7.8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside. (Note: The process is a wet process that uses a binder.)

(g) One (1) Dryer and Bagging Operation, constructed in 2010, consisting of a 160 degree electric dryer, a storage area, conveyor, a screen and transfer operation, with a maximum capacity of 9 tons of refractory brick material per hour, controlled by a baghouse identified as BH-1.

Under NSPS, Subpart OOO, the Dryer and Bagging Operation is considered an affected facility.

(h) One (1) Vertical Shaft Impact (VSI) Line, constructed in 2010, consisting of a crusher and SWECO screen, hopper loading and transfer operation, with a maximum capacity of 7 tons of refractory brick material per hour, controlled by a baghouse identified as BH-2.

Under NSPS, Subpart OOO, the Vertical Shaft Impact (VSI) Line is considered an affected facility.

(i) One (1) Ball Mill Line, approved for construction in 2011, with a maximum capacity of 12 tons of refractory brick material per hour, controlled by a baghouse identified as BH-3.

Under NSPS, Subpart OOO, the Ball Mill Line is considered an affected facility.

## SECTION B GENERAL CONDITIONS

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

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

B.2 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][IC 13-15-3-6(a)]

(a) This permit, M053-30100-00071, 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. 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 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, 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.11 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) 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 Permittee shall implement the PMPs.

(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.

(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.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M053-30100-00071 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.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

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

B.14 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 an affirmation that the statements in the application are true and complete 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 one hundred twenty (120) days prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.15 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.16 Source Modification Requirement

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

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

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

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

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

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

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.19 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

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

B.20 Credible Evidence [326 IAC 1-1-6]

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

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

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

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

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

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

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to 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 5-1-1 (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.

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

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

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

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

(a) 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.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test 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 IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

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

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

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

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

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps**

C.12 Response to Excursions or Exceedances

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.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 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.

**Record Keeping and Reporting Requirements [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 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, 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 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, 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) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, 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:**

(a) One (1) flux production line, constructed in 2007, consisting of a charge bin, cement mixer and a bag stand and transfer operation, with a maximum capacity of 8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(b) One (1) SWECO Line, constructed in 2007, consisting of a SWECO screen, conveyor, and hopper loading stations, with a maximum capacity of 4 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the SWECO Line is considered an affected facility.

(c) One (1) CrushTech 1348J mobile crusher, constructed in 2007, with a maximum capacity of 200 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the CrushTech 1348J mobile crusher is considered an affected facility.

(d) One (1) Screen Line, constructed in 2008, consisting of a vibratory feeder and a trommel screen, with a maximum capacity of 15 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the Screen Line is considered an affected facility.

(e) One (1) Tap Mix Line, constructed in 2008, consisting of a hopper loading station and transfer operation, with a maximum capacity of 12 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(f) One (1) Briquette Line, constructed in 2008, consisting of one mixer one briquette machine, and transfer operation, with a maximum capacity of 7.8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside. (Note: The process is a wet process that uses a binder.)

(g) One (1) Dryer and Bagging Operation, constructed in 2010, consisting of a 160 degree electric dryer, a storage area, conveyor, a screen and transfer operation, with a maximum capacity of 9 tons of refractory brick material per hour, controlled by a baghouse identified as BH-1.

Under NSPS, Subpart OOO, the Dryer and Bagging Operation is considered an affected facility.

(h) One (1) Vertical Shaft Impact (VSI) Line, constructed in 2010, consisting of a crusher and SWECO screen, hopper loading and transfer operation, with a maximum capacity of 7 tons of refractory material refractory brick material per hour, controlled by a baghouse identified as BH-2.

Under NSPS, Subpart OOO, the Vertical Shaft Impact (VSI) Line is considered an affected facility.

(i) One (1) Ball Mill Line, approved for construction in 2011, with a maximum capacity of 12 tons of refractory brick material per hour, controlled by a baghouse identified as BH-3.

Under NSPS, Subpart OOO, the Ball Mill Line is considered an affected facility.

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

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

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

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Particulate Emission Limit (lb/hour) |
|---|---|---|---|
| | (lbs/hr) | (tons/hr) | |
| **Flux Production Line** | | | |
| Transfer from Feed Hopper | 16,000 | 8 | 16.51 |
| Transfer to Charge Bin | 16,000 | 8 | 16.51 |
| Transfer to Cement Mixer | 16,000 | 8 | 16.51 |
| Cement Mixer | 16,000 | 8 | 16.51 |
| Transfer to Bag Stand | 16,000 | 8 | 16.51 |
| **SWECO Line** | | | |
| Hopper Loading | 8000 | 4 | 10.38 |
| Conveyer Transfer Point | 8000 | 4 | 10.38 |
| SWECO Screen | 8000 | 4 | 10.38 |
| Finish Hoppers Loading | 8000 | 4 | 10.38 |
| **CrushTech 1348J** | | | |
| CrushTech 1348J | 400,000 | 200 | 58.51 |
| **Screen Line** | | | |
| Vibratory Feeder | 30,000 | 15 | 25.16 |
| Trommell Screen | 30,000 | 15 | 25.16 |
| **Tap Mix Line** | | | |
| Transfer from Hoppers | 24,000 | 12 | 21.61 |
| Hopper Loading | 24,000 | 12 | 21.61 |
| **Briquette Line** | | | |
| Transfer from Hoppers | 15,600 | 7.8 | 16.24 |
| Transfer to Mixer | 15,600 | 7.8 | 16.24 |
| Mixer | 15,600 | 7.8 | 16.24 |
| Briquette Machine | 15,600 | 7.8 | 16.24 |
| Transfer to Finish Hoppers | 15,600 | 7.8 | 16.24 |
| **Dryer and Bagging Operation** | | | |
| Transfer from Feeder | 18,000 | 9.0 | 17.87 |
| Transfer to Dryer | 18,000 | 9.0 | 17.87 |
| Dryer and Bagging | 18,000 | 9.0 | 17.87 |
| Conveyor Transfer Point | 18,000 | 9.0 | 17.87 |
| Screen | 18,000 | 9.0 | 17.87 |
| Conveyor Transfer Point | 18,000 | 9.0 | 17.87 |
| Storage Area | 18,000 | 9.0 | 17.87 |
| **VSI Line** | | | |
| Hopper Loading | 14,000 | 7.0 | 15.10 |
| Transfer to Crusher | 14,000 | 7.0 | 15.10 |
| Crusher | 14,000 | 7.0 | 15.10 |
| Transfer to Screen | 14,000 | 7.0 | 15.10 |

| | | | |
|---|---|---|---|
| SWECO Screen | 14,000 | 7.0 | 15.10 |
| Hopper Loading | 14,000 | 7.0 | 15.10 |
| **Ball Mill Line** | | | |
| Ball Mill Line | 24,000 | 12.00 | 21.67 |

(a) All units, except for the CrushTech 1348J

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

(b) For the CrushTech 1348J only

Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{011} - 40$ 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 is required for the all the emissions units and their 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.1.3 Particulate Control

(a) In order to comply with Condition D.1.1, the baghouse for particulate control shall be in operation at all times that the Dryer and Bagging Operation is in operation.

(b) In order to comply with Condition D.1.1, the baghouse for particulate control shall be in operation at all times that the VSI Line is in operation.

(c) In order to comply with Condition D.1.1, the baghouse for particulate control shall be in operation at all times that the Ball Mill Line is in operation.

(d) 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 2-6.1-5(a)(2)]**

D.1.4 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the Dryer and Bagging Operation, the VSI Line, and the Ball Mill Line at least once per day when the process is in operation. The Permittee shall record the pressure drop of at least 0.5 to 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. 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 a 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.1.5 Visible Emissions Notations

(a) Daily visible emission notations of the baghouses used in conjunction with the Dryer and Bagging Operation (BH-1), the VSI Line (BH-2), and the Ball Mill Line (BH-3), shall be performed during normal daylight operations. 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.1.6 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. 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 baghouse 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 either the shot blaster. 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 baghouse 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 the compliance status with Condition D.1.5, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of the pressure drop reading (i.e. the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

## SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(b) One (1) SWECO Line, constructed in 2007, consisting of a SWECO screen, conveyor, and hopper loading stations, with a maximum capacity of 4 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(c) One (1) CrushTech 1348J mobile crusher, constructed in 2007, with a maximum capacity of 200 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(d) One (1) Screen Line, constructed in 2008, consisting of a vibratory feeder and a trommel screen, with a maximum capacity of 15 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(g) One (1) Dryer and Bagging Operation, constructed in 2010, consisting of a 160 degree electric dryer, a storage area, conveyor, a screen and transfer operation, with a maximum capacity of 9 tons of refractory brick material per hour, controlled by a baghouse identified as BH-1.

(h) One (1) Vertical Shaft Impact (VSI) line, constructed in 2010, consisting of a crusher and SWECO screen, with a maximum capacity of 7 tons per hour controlled with a baghouse identified as BH-2.

(i) One Ball Mill Line, approved for construction in 2011, with a maximum capacity of 12 tons of refractory brick material per hour, controlled by a baghouse identified as BH-3.

Under NSPS, Subpart OOO, these units are considered affected facilities.

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

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]**

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 except as otherwise specified in 40 CFR Part 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports 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

E.1.2 Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart OOO, the Permittee shall comply with the provisions of Standards of Performance for Nonmetallic Mineral Processing Plants, which are incorporated by reference as 326 IAC 12. The full text of Subpart OOO may be found in Attachment A to this permit.

The affected facilities are subject to the following requirements of 40 CFR 60, Subpart OOO:

(1) 40 CFR 60.670
(2) 40 CFR 60.671
(3) 40 CFR 60.672
(4) 40 CFR 60.673
(5) 40 CFR 60.674
(6) 40 CFR 60.675
(7) 40 CFR 60.676
(8) Table 1
(9) Table 2
(10) Table 3

E.1.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-5(a)(2)]

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To document the compliance status with Condition E.1.2, the Permittee shall perform the stack testing required under NSPS 40 CFR 60, Subpart OOO, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR QUALITY**
**COMPLIANCE AND ENFORCEMENT 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:** | Melt Solutions |
| **Address:** | 201 East Charles Street |
| **City:** | Marion, Indiana 46952 |
| **Phone #:** | 765-668-0101 |
| **MSOP #:** | M053-30100-00071 |

I hereby certify that Melt Solutions is : ☐ still in operation.
☐ no longer in operation.

I hereby certify that Melt Solutions is : ☐ in compliance with the requirements of MSOP M053-30100-00071.
☐ not in compliance with the requirements of MSOP M053-30100-00071.

| |
|---|
| **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
## COMPLIANCE AND ENFORCEMENT BRANCH
**FAX NUMBER: (317) 233-6865**

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

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

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

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

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

**326 IAC 1-6-1 Applicability of rule**

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

**326 IAC 1-2-39 "Malfunction" definition**

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

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

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

_____
_____

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

Melt Solutions
201 East Charles Street
Marion, Indiana 46952

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)

4. I hereby certify that Melt Solutions, 201 East Charles Street, Marion, Indiana 46952, completed construction of the brick recycling operation to produce fluxes, tap sands and briquettes _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on January 7, 2011 and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M053-30100-00071, Plant ID No. 053-00071 issued on _____.

5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____
Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____ )

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana

on this _____ day of _____, 20 _____. My Commission expires: _____.

Signature_____
Name_____ (typed or printed)

# FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
# OFFICE OF AIR QUALITY

**Melt Solutions**
**201 East Charles Street**
**Marion, Indiana 46952**

**Attachment A**

**Title 40: Protection of Environment**

**Part 60 - Standards of Performance for New Stationary Sources**

**Subpart OOO**

**Standards of Performance for Nonmetallic Mineral Processing Plants**

## Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

**Source:** 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

### § 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

**§ 60.671 Definitions.**

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

*Bagging operation* means the mechanical process by which bags are filled with nonmetallic minerals.

*Belt conveyor* means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

*Bucket elevator* means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

*Building* means any frame structure with a roof.

*Capacity* means the cumulative rated capacity of all initial crushers that are part of the plant.

*Capture system* means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

*Control device* means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

*Conveying system* means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

*Crush* or *Crushing* means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

*Crusher* means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

*Enclosed truck or railcar loading station* means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

*Fixed plant* means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

*Fugitive emission* means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

*Grinding mill* means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

*Initial crusher* means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

*Nonmetallic mineral* means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl,

Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

*Nonmetallic mineral processing plant* means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

*Portable plant* means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

*Production line* means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

*Saturated material* means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket

elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be “saturated” for purposes of this definition.

*Screening operation* means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

*Seasonal shut down* means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

*Size* means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

*Stack emission* means the particulate matter that is released to the atmosphere from a capture system.

*Storage bin* means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

*Transfer point* means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

*Truck dumping* means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

*Vent* means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

*Wet material processing operation(s)* means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

*Wet mining operation* means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

*Wet screening operation* means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

**§ 60.672 Standard for particulate matter (PM).**

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

### § 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital cost that would be required to construct a comparable new facility” under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

### § 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator

must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A–7). The Method 22 (40 CFR part 60, Appendix A–7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A–7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A–7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A–7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means ( *e.g.* , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the

alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A–7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

**§ 60.675 Test methods and procedures.**

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A–1 through A–7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A–3 of this part or Method 17 of Appendix A–6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A–4 of this part and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A–4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources ( *e.g.,* road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A–4), the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be

conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A–3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A–3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A–1 of this part [ *i.e.,* velocity head <1.3 mm $H_2O$ (0.05 in. $H_2O$)] and referred to in EPA Method 5 of Appendix A–3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans ( *e.g.,* from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \qquad \text{(Eq. 1)}$$

Where:

$V_e$= average building vent velocity (feet per minute);

$Q_f$= average fan flow rate (cubic feet per minute); and

$A_e$= area of building vent and measurement location (square feet).

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

**§ 60.676 Reporting and recordkeeping.**

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A–4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

**Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO**

**Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO**

| Subpart A reference | Applies to subpart OOO | Explanation |
|---|---|---|
| 60.4, Address | Yes | Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)). |
| 60.7, Notification and recordkeeping | Yes | Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)). |
| | | Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)). |
| 60.8, Performance tests | Yes | Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)). |
| 60.11, Compliance with standards and maintenance requirements | Yes | Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, Appendix A–4) observation is reduced from 3 hours to 30 minutes for fugitive emissions. |
| 60.18, General control device | No | Flares will not be used to comply with the emission limits. |

**Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems**

**Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems**

| For * * * | The owner or operator must meet a PM limit of * * * | And the owner or operator must meet an opacity limit of * * * | The owner or operator must demonstrate compliance with these limits by conducting * * * |
|---|---|---|---|
| Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 | 0.05 g/dscm (0.022 gr/dscf)[a] | 7 percent for dry control devices[b] | An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), |

| | | | |
|---|---|---|---|
| | | | (d), and (e). |
| Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008 | 0.032 g/dscm (0.014 gr/dscf)[a] | Not applicable (except for individual enclosed storage bins)<br>7 percent for dry control devices on individual enclosed storage bins | An initial performance test according to §60.8 of this part and §60.675 of this subpart; and<br>Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and |
| | | | Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b). |

[a]Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

[b]The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

**Table 3 to Subpart OOO—Fugitive Emission Limits**

**Table 3 to Subpart OOO—Fugitive Emission Limits**

| **For * * *** | **The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *** | **The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *** | **The owner or operator must demonstrate compliance with these limits by conducting * * *** |
|---|---|---|---|
| Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 | 10 percent opacity | 15 percent opacity | An initial performance test according to §60.11 of this part and §60.675 of this subpart. |
| Affected facilities (as | 7 percent opacity | 12 percent | An initial performance test |

| | | | |
|---|---|---|---|
| defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008 | | opacity | according to §60.11 of this part and §60.675 of this subpart; and Periodic inspections of water sprays according to §60.674(b) and §60.676(b); and |
| | | | A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement. |

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# Indiana Department of Environmental Management
# Office of Air Quality

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

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **Melt Solutions** |
| **Source Location:** | **201 East Charles Street, Marion, IN 46952** |
| **County:** | **Grant** |
| **SIC Code:** | **3241** |
| **Operation Permit No.:** | **053-30100-00071** |
| **Permit Reviewer:** | **Deborah Cole** |

On June 8, 2011, the Office of Air Quality (OAQ) had a notice published in the Marion Chronicle Tribune, Marion, Indiana, stating that Melt Solutions had applied for a Minor Source Operating Permit (MSOP) for the construction and operation of new emission units and the continued operation of an existing brick recycling operation which produces fluxes, tap sands and briquettes. This is not a brick manufacturing plant. The notice also stated that the OAQ proposed to issue an MSOP 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.

**Comments and Responses**

No comments were received during the public notice period.

**Additional Changes**

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

(a) 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 $CO_2$ equivalent emissions ($CO_2e$). Therefore, $CO_2e$ 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 $CO_2e$ per year (see summary table below and ATSD Appendix A for more detailed calculations). This did not require any changes to the permit.

...

**Permit Level Determination – MSOP**

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 85.55 |
| PM10(1) | 29.45 |
| PM2.5 | 24.32 |
| $SO_2$ | 0 |
| $NO_x$ | 0 |
| VOC | 0 |
| CO | 0 |
| **GHGs as $CO_2e$** | **0** |
| HAPs | 0 |

(1) 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".

...

**(c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of $CO_2$ equivalent emissions ($CO_2e$) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.**

...

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

The table below summarizes the potential to emit of the entire source after issuance of this MSOP, reflecting all limits, of the emission units.

| Process/ Emission Unit | **Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | $PM_{10}$* | $PM_{2.5}$** | $SO_2$ | $NO_x$ | VOC | CO | **GHGs** | Total HAPs | Worst Single HAP |
| Flux Line (2007) | 19.48 | 4.85 | 4.85 | - | - | - | - | **-** | - | - |
| SWECO Line (2007) | 0.91 | 0.37 | 0.37 | - | - | - | - | **-** | - | - |
| CrushTech 1348J (2007) | 21.90 | 7.62 | 7.62 | - | - | - | - | **-** | - | - |
| Screen Line (2008) | 22.27 | 5.72 | 5.72 | - | - | - | - | **-** | - | - |
| Tap Mix Line (2008) | 0.43 | 0.18 | 0.18 | - | - | - | - | **-** | - | - |
| Briquette Line (2008) | 7.82 | 2.78 | 2.78 | - | - | - | - | **-** | - | - |
| Dryer and Bagging (2010) | 7.33 | 6.09 | 6.09 | - | - | - | - | **-** | - | - |

| Process/ Emission Unit | Potential To Emit of the Entire Source After Issuance of Renewal (tons/year) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | $PM_{10}$* | $PM_{2.5}$** | $SO_2$ | $NO_x$ | VOC | CO | **GHGs** | Total HAPs | Worst Single HAP |
| VSI Line (2010) | 3.20 | 1.21 | 1.21 | - | - | - | - | **-** | - | - |
| Ball Mill (2011) | 1.31 | 0.46 | 0.46 | - | - | - | - | **-** | - | - |
| Fugitive Emissions | 0.89 | 29.45 | 29.32 | - | - | - | - | **-** | - | - |
| **Total PTE of Entire Source** | **85.55** | **29.45** | **29.32** | - | - | - | - | **-** | - | - |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | **100,000 $CO_2e$** | 25 | 10 |
| PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | **100,000 $CO_2e$** | NA | NA |
| Emission Offset/ Nonattainment NSR Major Source Thresholds | NA | NA | NA | NA | NA | NA | NA | **NA** | NA | NA |

negl. = negligible

*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".

**$PM_{2.5}$ listed is direct $PM_{2.5}$.

## IDEM Contact

(a) Questions regarding this proposed MSOP can be directed to Deborah Cole 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) 234-5377 or toll free at 1-800-451-6027 extension 4-5377.

(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 Construction and Minor Source Operating Permit (MSOP)

### Source Description and Location

| | |
|---|---|
| **Source Name:** | **Melt Solutions** |
| **Source Location:** | **201 East Charles Street, Marion, IN 46952** |
| **County:** | **Grant** |
| **SIC Code:** | **3241** |
| **Operation Permit No.:** | **053-30100-00071** |
| **Permit Reviewer:** | **Deborah Cole** |

On January 7, 2011, the Office of Air Quality (OAQ) received an application from Melt Solutions related to the construction and operation of new emission units and the continued operation of an existing brick recycling operation which produces fluxes, tap sands and briquettes. This is not a brick manufacturing plant.

### Existing Approvals

There have been no previous approvals issued to this source.

### County Attainment Status

The source is located in Grant County.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1] |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

[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.

*(Air Pollution Control Board; 326 IAC 1-4-28; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)*

(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. Grant 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) $PM_{2.5}$
Grant 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
Grant County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants . Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

## Fugitive Emissions

(a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

(b) 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.

## Background and Description of Permitted Emission Units

The Office of Air Quality (OAQ) has reviewed an application, submitted by Melt Solutions on January 10, 2011, relating to a brick recycling operation which produces fluxes, tap sands and briquettes. The PTE of the following three existing emission units was less than five (5) tons per year thus making the source an Exemption. However, when the source began expansion of its operation and constructed additional emission units, the PTE increased to an MSOP applicability threshold of greater than 25 tons per year but less than 100 tons per year. The source then applied for a Minor Source Operating Permit (MSOP).

The source consists of the following existing emission units:

(a) One (1) flux production line, constructed in 2007, consisting of a charge bin, cement mixer and a bag stand and transfer operation, with a maximum capacity of 8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(b) One SWECO Line, constructed in 2007, consisting of a SWECO screen, conveyor, and hopper loading stations, with a maximum capacity of 4 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the SWECO Line is considered an affected facility.

(c) One CrushTech 1348J mobile crusher, constructed in 2007, with a maximum capacity of 200 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the CrushTech 1348J mobile crusher is considered an affected facility.

## Unpermitted and New Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

(d) One Screen Line, constructed in 2008, consisting of a vibratory feeder and a trommel screen, with a maximum capacity of 15 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

Under NSPS, Subpart OOO, the Screen Line is considered an affected facility.

(e) One Tap Mix Line, constructed in 2008, consisting of a hopper loading station and transfer operation, with a maximum capacity of 12 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(f) One Briquette Line, constructed in 2008, consisting of one mixer, one briquette machine, and transfer operation, with a maximum capacity of 7.8 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside. (Note: The process is a wet process that uses a binder.)

(g) One (1) Dryer and Bagging Operation, constructed in 2010, consisting of a 160 degree electric dryer, a storage area, conveyor, a screen and transfer operation, with a maximum capacity of 9 tons of refractory brick material per hour, controlled by a baghouse identified as BH-1.

Under NSPS, Subpart OOO, the Dryer and Bagging Operation is considered an affected facility.

(h) One Vertical Shaft Impact (VSI) Line, constructed in 2010, consisting of a crusher and SWECO screen, hopper loading and transfer operation, with a maximum capacity of 7 tons of refractory brick material per hour, controlled by a baghouse identified as BH-2.

Under NSPS, Subpart OOO, the Vertical Shaft Impact (VSI) Line is considered an affected facility.

The source consists of the following new emission unit:

(i) One Ball Mill Line, approved for construction in 2011, with a maximum capacity of 12 tons of refractory brick material per hour, controlled by a baghouse identified as BH-3.

Under NSPS, Subpart OOO, the Ball Mill Line is considered an affected facility.

## Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

## Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

## Permit Level Determination – MSOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 85.55 |
| $PM_{10}$ (1) | 29.45 |
| $PM_{2.5}$ | 29.32 |
| $SO_2$ | 0 |
| $NO_x$ | 0 |
| VOC | 0 |
| CO | 0 |
| HAPs | 0 |

(1) 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".

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are each less than one hundred (100) tons per year, but PM, $PM_{10}$ and $PM_{2.5}$ PTE are greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

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

The table below summarizes the potential to emit of the entire source after issuance of this MSOP, reflecting all limits, of the emission units.

| Process/ Emission Unit | **Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | PM | *$PM_{10}$ | $PM_{2.5}$ | $SO_2$ | $NO_x$ | VOC | CO | Total HAPs | Worst Single HAP |
| Flux Line (2007) | 19.48 | 4.85 | 4.85 | - | - | - | - | - | - |
| SWECO Line (2007) | 0.91 | 0.37 | 0.37 | - | - | - | - | - | - |
| CrushTech 1348J (2007) | 21.90 | 7.62 | 7.62 | - | - | - | - | - | - |
| Screen Line (2008) | 22.27 | 5.72 | 5.72 | - | - | - | - | - | - |
| Tap Mix Line (2008) | 0.43 | 0.18 | 0.18 | - | - | - | - | - | - |
| Briquette Line (2008) | 7.82 | 2.78 | 2.78 | - | - | - | - | - | - |
| Dryer and Bagging (2010) | 7.33 | 6.09 | 6.09 | - | - | - | - | - | - |
| VSI Line (2010) | 3.20 | 1.21 | 1.21 | - | - | - | - | - | - |
| Ball Mill (2011) | 1.31 | 0.46 | 0.46 | - | - | - | - | - | - |
| Fugitive Emissions | 0.89 | 29.45 | 29.32 | - | - | - | - | - | - |
| **Total PTE of Entire Source** | **85.55** | **29.45** | **29.32** | - | - | - | - | - | - |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 25 | 10 |
| PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | NA | NA |
| Emission Offset/ Nonattainment NSR Major Source Thresholds | NA | NA | NA | NA | NA | NA | NA | NA | NA |

negl. = negligible
* 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".

**Federal Rule Applicability Determination**

New Source Performance Standards (NSPS)

(a) The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO (326 IAC 12), are applicable to the following affected units because they all commenced construction after August 31, 1983:

(1) One (1) SWECO Line, constructed in 2007, consisting of a SWECO screen, conveyor, and hopper loading stations, with a maximum capacity of 4 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(2) One (1) CrushTech 1348J mobile crusher, constructed in 2007, with a maximum capacity of 200 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(3) One (1) Screen Line, constructed in 2008, consisting of a vibratory feeder and a trommel screen, with a maximum capacity of 15 tons of refractory brick material per hour, uncontrolled emissions exhausting to the inside.

(4) One (1) Dryer and Bagging Operation, constructed in 2010, consisting of a 160 degree electric dryer, a storage area, conveyor, a screen and transfer operation, with a maximum capacity of 9 tons of refractory brick material per hour, controlled by a baghouse identified as BH-2.

(5) One (1) Vertical Shaft Impact (VSI) line, constructed in 2010, consisting of a crusher and SWECO screen, with a maximum capacity of 7 tons per hour controlled with a baghouse identified as BH-2.

(6) One Ball Mill Line, approved for construction in 2011, with a maximum capacity of 12 tons of refractory brick material per hour, controlled by a baghouse identified as BH-3.

These affected facilities are subject to the following requirements of 40 CFR 60, Subpart OOO:

(1) 40 CFR 60.670
(2) 40 CFR 60.671
(3) 40 CFR 60.672
(4) 40 CFR 60.673
(5) 40 CFR 60.674
(6) 40 CFR 60.675
(7) 40 CFR 60.676
(8) Table 1
(9) Table 2
(10) Table 3

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the the source except as otherwise specified in 40 CFR 60, Subpart OOO.

(b) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(c) The requirements of 40 CFR Part 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing, are not included in this permit because the source is not a major source of HAPs and the source does not fit the definition of a brick and structural clay products manufacturing facility as defined in 40 CFR, Subpart JJJJJ, § 63.8515.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

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

**State Rule Applicability Determination**

The following state rules are applicable to the source:

(a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(e) 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 this permit:

(1) 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.

(2) 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.

(f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(g) 326 IAC 8 (Volatile Organic Compound Rules)
The source does not have the potential to emit any volatile organic compounds; therefore no 326 IAC 8 Rules are applicable to the source.

**Flux Production Line**

(a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the flux production line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Transfer from Feed Hopper | 16000 | 8 | 0.02 | 16.51 |
| Transfer to Charge Bin | 16000 | 8 | 0.02 | 16.51 |
| Transfer to Cement Mixer | 16000 | 8 | 0.02 | 16.51 |
| Cement Mixer | 16000 | 8 | 4.35 | 16.51 |
| Transfer to Bag Stand | 16000 | 8 | 0.02 | 16.51 |

*See Appendix A for the calculations.

**These 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:

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

The uncontrolled PM emissions from each unit in the flux production line are less than the 326 IAC 6-3-2 allowable emissions. Therefore, the flux production line is in compliance with this rule.

**SWECO Line**

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the SWECO Line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Hopper Loading | 8000 | 4 | 0.02 | 10.38 |
| Conveyer Transfer Point | 8000 | 4 | 0.01 | 10.38 |
| SWECO Screen | 8000 | 4 | 0.16 | 10.38 |
| Finish Hoppers Loading | 8000 | 4 | 0.02 | 10.38 |

*See Appendix A for the calculation.

**These 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:

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

The uncontrolled PM emissions from each unit in the SWECO line are less than the 326 IAC 6-3-2 allowable emissions. Therefore, the SWECO line is in compliance with this rule.

**CrushTech 1348J**

(c) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the CrushTech 1348J shall not exceed the pound per hour limitation listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| CrushTech 1348J | 400,000 | 200 | 5.00 | 58.51 |

*See Appendix A for the calculation.

**This limitation was calculated as follows:

Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{011} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The PM emissions from the CrushTech 1348J are less than the 326 IAC 6-3-2 allowable emissions. Therefore, the CrushTech 1348J is in compliance with this rule.

**Screen Line**

(d) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the Screen Line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Vibratory Feeder | 30,000 | 15 | 4.50 | 25.16 |
| Trommell Screen | 30,000 | 15 | 0.59 | 25.16 |

*See Appendix A for calculation.

**These 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:

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

The uncontrolled PM emissions from each unit in the Screen Line are less than the 326 IAC 6-3-2 allowable emissions. Therefore, the Screen Line is in compliance with this rule.

**Tap Mix Line**

(e) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the Tap Mix Line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Transfer from Hoppers | 24,000 | 12 | 0.04 | 21.61 |
| Hopper Loading | 24,000 | 12 | 0.06 | 21.61 |

*See Appendix A for calculation.

**These 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:

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

The uncontrolled PM emissions from the Tap Mix Line are less than the 326 IAC 6-3-2 allowable emissions. Therefore, the Tap Mix Line is in compliance with this rule.

**Briquette Line**

(f) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the Briquette Line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Transfer from Hoppers | 15,600 | 7.8 | 0.02 | 16.24 |
| Transfer to Mixer | 15,600 | 7.8 | 0.02 | 16.24 |
| Mixer | 15,600 | 7.8 | 1.72 | 16.24 |
| Briquette Machine | 15,600 | 7.8 | neg. | 16.24 |
| Transfer to Finish Hoppers | 15,600 | 7.8 | 0.02 | 16.24 |

*See Appendix A for calculation.

**These 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:

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

The uncontrolled PM emissions from the Briquette Line are less than the 326 IAC 6-3-2 allowable emissions. Therefore the Briquette Line is in compliance with this rule.

**Dryer and Bagging Operation**

(g) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the Dryer and Bagging Operation shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Transfer from Feeder | 18,000 | 9.0 | 0.03 | 17.87 |
| Transfer to Dryer | 18,000 | 9.0 | 0.03 | 17.87 |
| Dryer and Bagging | 18,000 | 9.0 | 0.14 | 17.87 |
| Conveyor Transfer Point | 18,000 | 9.0 | 0.03 | 17.87 |
| Screen | 18,000 | 9.0 | 0.35 | 17.87 |
| Conveyor Transfer Point | 18,000 | 9.0 | 0.03 | 17.87 |
| Storage Area | 18,000 | 9.0 | 1.08 | 17.87 |

*See Appendix A for calculation.

**These 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:

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

The PM emissions from the Dryer and Bagging Operation are less than the 326 IAC 6-3-2 allowable emissions. However, to insure compliance with this limit and since the emission factors used are for a similar operation, the baghouse shall be in operation at all times the Dryer and Bagging Operation is in operation.

**VSI Line**

(h) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the VSI Line shall not exceed the corresponding pound per hour limitations listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Hopper Loading | 14,000 | 7.0 | 0.04 | 15.10 |
| Transfer to Crusher | 14,000 | 7.0 | 0.04 | 15.10 |
| Crusher | 14,000 | 7.0 | 0.18 | 15.10 |
| Transfer to Screen | 14,000 | 7.0 | 0.18 | 15.10 |
| SWECO Screen | 14,000 | 7.0 | 0.27 | 15.10 |

| | | | | |
|---|---|---|---|---|
| Hopper Loading | 14,000 | 7.0 | 0.04 | 15.10 |

*See Appendix A for calculation.

**These 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:

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

The uncontrolled PM emissions from the VSI Line are less than the 326 IAC 6-3-2 allowable emissions. However, to insure compliance with this limit and since the emission factors used are for a similar operation, the baghouse shall be in operation at all times the VSI Line is in operation.

**Ball Mill**

(j) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Ball Mill shall not exceed the pound per hour limitation listed in the table below:

| Emission Unit | Process Weight Rate | | Uncontrolled PM emissions (lb/hour)* | Allowable Emission Rate (lb/hour)** |
|---|---|---|---|---|
| | (lbs/hr) | (tons/hr) | | |
| Ball Mill Line | 24,000 | 12.00 | 0.30 | 21.67 |

*See Appendix A for calculation.

**This limitation was 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:

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

The uncontrolled PM emissions from the Ball Mill are less than the 326 IAC 6-3-2 allowable emissions. However, to insure compliance with this limit and since the emission factors used are for a similar operation, the baghouse shall be in operation at all times the Ball Mill is in operation.

(j) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

**Compliance Determination and Monitoring Requirements**

(a) The compliance determination and monitoring requirements applicable to this source are as follows:

| Emission Unit/Control | Operating Parameters | Frequency | Range | |
|---|---|---|---|---|
| Baghouse - BH1 | Pressure Drop | Once per day | 0.5 - 6 inches | Response Steps |
| | Visible Emissions | | Normal/Abnormal | |
| Baghouse - BH2 | Pressure Drop | Once per day | 0.5 - 6 inches | Response Steps |
| | Visible Emissions | | Normal/Abnormal | |
| Baghouse - BH3 | Pressure Drop | Once per day | 0.5 - 6 inches | Response Steps |
| | Visible Emissions | | Normal/Abnormal | |

## Testing Requirements

This source is subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO and therefore must conduct an initial performance testing for PM following the testing protocol contained in New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO.

## Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 7, 2011. Additional information was submitted on February 6, 2011, March 17, 2011 and March 24, 2011.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and MSOP No. 053-30100-00071. The staff recommends to the Commissioner that this New Source Construction MSOP be approved.

## IDEM Contact

(a) Questions regarding this proposed permit can be directed to Deborah Cole 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) 234-5377 or toll free at 1-800-451-6027 extension 4-5377.

(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.in.gov/idem

**Appendix A: Emissions Calculations**
**Summary Emissions**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

**UNCONTROLLED POTENTIAL TO EMIT IN TONS PER YEAR - Criteria Pollutants**

| Emission Units | PM | PM10 | PM2.5 | $SO_2$ | NOx | VOC | CO | GHGs* | Single HAP | Combined HAP |
|---|---|---|---|---|---|---|---|---|---|---|
| Flux Line (2007) | 19.48 | 4.85 | 4.85 | - | - | - | - | - | - | |
| SWECO Line (2007) | 0.91 | 0.37 | 0.37 | - | - | - | - | - | - | - |
| CrushTech 1348J (2007) | 21.90 | 7.62 | 7.62 | - | - | - | - | - | - | - |
| Screen Line (2008) | 22.27 | 5.72 | 5.72 | - | - | - | - | - | - | - |
| Tap Mix Line (2008) | 0.43 | 0.18 | 0.18 | - | - | - | - | - | - | - |
| Briquette Line (2008) | 7.82 | 2.78 | 2.78 | - | - | - | - | - | - | - |
| Dryer and Bagging (2010) | 7.33 | 6.09 | 6.09 | - | - | - | - | - | - | - |
| VSI Line (2010) | 3.20 | 1.21 | 1.21 | - | - | - | - | - | - | - |
| Ball Mill (2011) | 1.31 | 0.46 | 0.46 | - | - | - | - | - | - | - |
| Fugitive Emissions (Paved Roads-unmitigated) | 0.89 | 0.18 | 0.04 | - | - | - | - | - | - | - |
| **TOTAL** | **85.55** | **29.45** | **29.32** | - | - | - | - | - | - | - |

**CONTROLLED POTENTIAL TO EMIT IN TONS PER YEAR - Criteria Pollutants**

| Emission Units | PM | PM10 | PM2.5 | $SO_2$ | NOx | VOC | CO | GHGs* | Single HAP | Combined HAP |
|---|---|---|---|---|---|---|---|---|---|---|
| Flux Line (2007) | 19.48 | 4.85 | 4.85 | - | - | - | - | - | - | - |
| SWECO Line (2007) | 0.91 | 0.37 | 0.37 | - | - | - | - | - | - | - |
| CrushTech 1348J (2007) | 21.90 | 7.62 | 7.62 | - | - | - | - | - | - | - |
| Screen Line (2008) | 22.27 | 5.72 | 5.72 | - | - | - | - | - | - | - |
| Tap Mix Line (2008) | 0.43 | 0.18 | 0.18 | - | - | - | - | - | - | - |
| Briquette Line (2008) | 7.82 | 2.78 | 2.78 | - | - | - | - | - | - | - |
| Dryer and Bagging (2010) | 0.07 | 0.06 | 0.06 | - | - | - | - | - | - | - |
| VSI Line (2010) | 0.03 | 0.01 | 0.01 | - | - | - | - | - | - | - |
| Ball Mill (2011) | 0.00 | 0.00 | 0.00 | - | - | - | - | - | - | - |
| Fugitive Emissions (Paved Roads-mitigated) | 0.82 | 0.16 | 0.04 | | | | | - | | |
| **TOTAL** | **73.74** | **21.75** | **21.63** | - | - | - | - | - | - | - |

Emissions based upon 8760 hours of operation.

* The source does not have any combustion.

**Company Name:** **Melt Solutions**
**Address City IN Zip:** **201 East Charles Street, Marion, IN 46952**
**Permit Number:** **M053-30100-00071**
**Reviewer:** **Deborah Cole**
**Date:** **3/3/2010**

| Unit | Capacity | Emission Factors | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Flux Line (2007)** | | | | | | | | | | |
| Transfer from Feed Hopper | 8.0 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.11 | 0.01 | 0.04 | 0.01 | 0.04 |
| Transfer to Charge Bin | 8.0 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.11 | 0.01 | 0.04 | 0.01 | 0.04 |
| Transfer to Cement Mixer | 8.0 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.11 | 0.01 | 0.04 | 0.01 | 0.04 |
| Cement Mixer | 8.0 | 0.544 | 0.134 | 0.134 | 4.35 | 19.06 | 1.07 | 4.70 | 1.07 | 4.70 |
| Transfer to Bag Stand | 8.0 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.11 | 0.01 | 0.04 | 0.01 | 0.04 |
| **Total** | | | | | **4.45** | **19.48** | **1.11** | **4.85** | **1.11** | **4.85** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton) x 8760 hrs/yr x 1 ton/2000 lbs

Conveyor Transfer Point emission factors are for Screen/Conveying/Handling for Stone Quarries [3-05-020-06] found at AP-42 Table 11.19.2-2 and FIRE
Hopper Loading emission factor is for Weight Hopper Loading for Concrete Batching [3-05-011-08] found at AP-42 Table 11-12-2

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr

| | | |
|---|---|---|
| P = | 16000 | lbs/hr |
| = | 8.00 | tons/hr |
| Allowable PM Emissions, E = | 16.51 | lbs/hr |
| = | 396.3 | lbs/day |
| = | 72.3 | tons/yr |

**Appendix A: Emissions Calculations**
**SWECO Line**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Capacity | Emission Factors | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **SWECO Line (2007)** | | | | | | | | | | |
| Hopper Loading | 4.0 | 0.0051 | 0.0024 | 0.0024 | 0.02 | 0.09 | 0.01 | 0.04 | 0.01 | 0.04 |
| Conveyor Transfer Point | 4.0 | 0.0030 | 0.0011 | 0.0011 | 0.01 | 0.05 | 0.00 | 0.02 | 0.00 | 0.02 |
| SWECO Screen | 4.0 | 0.039 | 0.015 | 0.015 | 0.16 | 0.68 | 0.06 | 0.26 | 0.06 | 0.26 |
| Finish Hoppers Loading | 4.0 | 0.0051 | 0.0024 | 0.0024 | 0.02 | 0.09 | 0.01 | 0.04 | 0.01 | 0.04 |
| **Total** | | | | | **0.21** | **0.91** | **0.08** | **0.37** | **0.08** | **0.37** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Conveyor Transfer Point emission factors are for Screen/Conveying/Handling for Stone Quarries [3-05-020-06] found at AP-42 Table 11.19.2-2 and FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)
where E = emissions in lbs/hr
P = process weight in tons/hr

| | | |
|---|---|---|
| P = | 8000 | lbs/hr |
| = | 4.00 | tons/hr |
| Allowable PM Emissions, E = | 10.38 | lbs/hr |
| = | 249.1 | lbs/day |
| = | 45.5 | tons/yr |

**Appendix A: Emissions Calculations**
**CrushTech 1348J**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Emission Factors | | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Capacity | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **CrushTech 1348J (2007)** | 200 | 0.025 | 0.0087 | 0.0087 | 5.00 | 21.90 | 1.74 | 7.62 | 1.74 | 7.62 |
| **Total** | | | | | **5.00** | **21.90** | **1.74** | **7.62** | **1.74** | **7.62** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Impactor and crusher emission factors are for Secondary Crushing for Stone Quarries [3-05-020-02] found in FIRE

Allowable Emissions, E = 55 * P^0.11 - 40 (for weight rates > 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr
P = 400,000 lbs/hr
= 200.00 tons/hr

Allowable PM Emissions, E = 58.51 lbs/hr
= 1404.2 lbs/day
= 256.3 tons/yr

**Appendix A: Emissions Calculations**
**Screen Line**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Capacity | Emission Factors | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Screen Line (2008)** | | | | | | | | | | |
| Vibratory Feeder | 15.0 | 0.3 | 0.072 | 0.072 | 4.50 | 19.71 | 1.08 | 4.73 | 1.08 | 4.73 |
| Trommel Screen | 15.0 | 0.039 | 0.015 | 0.015 | 0.59 | 2.56 | 0.23 | 0.99 | 0.23 | 0.99 |
| **Total** | | | | | **5.09** | **22.27** | **1.31** | **5.72** | **1.31** | **5.72** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Conveyor Transfer Point emission factors are for Screen/Conveying/Handling for Stone Quarries [3-05-020-06] found at AP-42 Table 11.19.2-2 and FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr

| | | |
|---|---|---|
| P = | 30000 | lbs/hr |
| = | 15.00 | tons/hr |
| Allowable PM Emissions, E = | 25.16 | lbs/hr |
| = | 603.9 | lbs/day |
| = | 110.2 | tons/yr |

**Appendix A: Emissions Calculations**
**Tap Mix Line**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Capacity | Emission Factors | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Tap Mix Line (2008)** | | | | | | | | | | |
| Transfer from Hoppers | 12.0 | 0.0030 | 0.0011 | 0.0011 | 0.04 | 0.16 | 0.01 | 0.06 | 0.01 | 0.06 |
| Hopper Loading | 12.0 | 0.0051 | 0.0024 | 0.0024 | 0.06 | 0.27 | 0.03 | 0.13 | 0.03 | 0.13 |
| **Total** | | | | | **0.10** | **0.43** | **0.04** | **0.18** | **0.04** | **0.18** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Conveyor Transfer Point emission factors are for Screen/Conveying/Handling for Stone Quarries [3-05-020-06] found at AP-42 Table 11.19.2-2 and FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr

| | | |
|---|---|---|
| P = | 24000 | lbs/hr |
| = | 12.00 | tons/hr |
| Allowable PM Emissions, E = | 21.67 | lbs/hr |
| = | 520.1 | lbs/day |
| = | 94.9 | tons/yr |

**Appendix A: Emissions Calculations**
**Briquette Line**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Capacity | Emission Factors | | | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Briquette Line (2008)** | | | | | | | | | | |
| Transfer from Hoppers | 7.8 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.10 | 0.01 | 0.04 | 0.01 | 0.04 |
| Transfer to Mixer | 7.8 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.10 | 0.01 | 0.04 | 0.01 | 0.04 |
| Mixer | 7.8 | 0.22 | 0.078 | 0.078 | 1.72 | 7.52 | 0.61 | 2.66 | 0.61 | 2.66 |
| Briquette Machine | 7.8 | neg. | neg. | neg. | neg. | neg. | neg. | neg. | neg. | neg. |
| Transfer to Finish Hoppers | 7.8 | 0.0030 | 0.0011 | 0.0011 | 0.02 | 0.10 | 0.01 | 0.04 | 0.01 | 0.04 |
| **Total** | | | | | **1.79** | **7.82** | **0.63** | **2.78** | **0.63** | **2.78** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Screening emission factors are for Fines Mills for Stone Quarries [3-05-020-05] found at AP-42 Table 11.19-2-2
Briquette mixer emission factor is for Mixer Loading of Cement/Sand/Aggregate for Concrete Batching [3-05-011-09] found in FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)
where E = emissions in lbs/hr
P = process weight in tons/hr

| | | |
|---|---|---|
| P = | 15600 | lbs/hr |
| = | 7.80 | tons/hr |
| Allowable PM Emissions, E = | 16.24 | lbs/hr |
| = | 389.7 | lbs/day |
| = | 71.1 | tons/yr |

**Appendix A: Emissions Calculations**
**Dryer and Bagging Operation**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Emission Factors | | | | Uncontrolled Emissions | | | | | | Control efficiency | Controlled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Capacity | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | | | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr | | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Dryer & Bagging (2010)** | | | | | | | | | | | | | | | | | |
| Transfer from Feeder | 9.0 | 0.0030 | 0.0011 | 0.0011 | 0.03 | 0.12 | 0.01 | 0.04 | 0.01 | 0.04 | 99% | 0.00027 | 0.001183 | 0.00010 | 0.000434 | 0.00010 | 0.00043 |
| Transfer to Dryer | 9.0 | 0.0030 | 0.0011 | 0.0011 | 0.03 | 0.12 | 0.01 | 0.04 | 0.01 | 0.04 | 99% | 0.00027 | 0.001183 | 0.00010 | 0.000434 | 0.00010 | 0.00043 |
| Dryer & Bagging | 9.0 | 0.015 | 0.015 | 0.015 | 0.14 | 0.59 | 0.14 | 0.59 | 0.14 | 0.59 | 99% | 0.00135 | 0.005913 | 0.00135 | 0.005913 | 0.00135 | 0.00591 |
| Conveyor Transfer Point | 9.0 | 0.0030 | 0.0011 | 0.0011 | 0.03 | 0.12 | 0.01 | 0.04 | 0.01 | 0.04 | 99% | 0.00027 | 0.001183 | 0.00010 | 0.000434 | 0.00010 | 0.00043 |
| Screen | 9.0 | 0.039 | 0.015 | 0.015 | 0.35 | 1.54 | 0.14 | 0.59 | 0.14 | 0.59 | 99% | 0.00351 | 0.015374 | 0.00135 | 0.005913 | 0.00135 | 0.00591 |
| Conveyor Transfer Point | 9.0 | 0.0030 | 0.0011 | 0.0011 | 0.03 | 0.12 | 0.01 | 0.04 | 0.01 | 0.04 | 99% | 0.00027 | 0.001183 | 0.00010 | 0.000434 | 0.00010 | 0.00043 |
| Storage Area | 9.0 | 0.1200 | 0.1200 | 0.1200 | 1.08 | 4.73 | 1.08 | 4.73 | 1.08 | 4.73 | 99% | 0.0108 | 0.047304 | 0.01080 | 0.047304 | 0.01080 | 0.04730 |
| **Total** | | | | | **1.67** | **7.33** | **1.39** | **6.09** | **1.39** | **6.09** | | | **0.07** | **0.01** | **0.06** | **0.01** | **0.06** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Conveyor Transfer Point emission factors are for Screen/Conveying/Handling for Stone Quarries [3-05-020-06] found at AP-42 Table 11.19.2-2 and FIRE
Dryer and Bagging emission factor is for Rotary Dryer, Sand Blasting Grit, with Fabric Filter for Abrasive Manufacturing found at AP-42 Table 11.31-1
Storage Area emission factor is for Aggregate Storage for Construction Sand and Gravel found in FIRE 3-05-02-502

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr
P = 18000 lbs/hr
= 9.00 tons/hr

Allowable PM Emissions, E = 17.87 lbs/hr
= 428.9 lbs/day
= 78.3 tons/yr

The use of a baghouse ensures compliance with the above limit.

**Appendix A: Emissions Calculations**
**VSI Line**

**Company Name:** Melt Solutions
**Address City IN Zip:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

| Unit | Emission Factors | | | | Uncontrolled Emissions | | | | | | Control efficiency | Controlled Emissions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Capacity | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | | | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr | | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **VSI Line (2010)** | | | | | | | | | | | | | | | | | |
| Hopper Loading | 7.0 | 0.0051 | 0.0024 | 0.0024 | 0.04 | 0.16 | 0.02 | 0.07 | 0.02 | 0.07 | 99% | 0.000357 | 0.001564 | 0.000168 | 0.000736 | 0.000168 | 0.000736 |
| Transfer to Crusher | 7.0 | 0.0051 | 0.0024 | 0.0024 | 0.04 | 0.16 | 0.02 | 0.07 | 0.02 | 0.07 | 99% | 0.000357 | 0.001564 | 0.000168 | 0.000736 | 0.000168 | 0.000736 |
| Crusher | 7.0 | 0.025 | 0.0087 | 0.0087 | 0.18 | 0.77 | 0.06 | 0.27 | 0.06 | 0.27 | 99% | 0.00175 | 0.007665 | 0.000609 | 0.002667 | 0.000609 | 0.002667 |
| Transfer to Screen | 7.0 | 0.025 | 0.0087 | 0.0087 | 0.18 | 0.77 | 0.06 | 0.27 | 0.06 | 0.27 | 99% | 0.00175 | 0.007665 | 0.000609 | 0.002667 | 0.000609 | 0.002667 |
| SWECO Screen | 7.0 | 0.039 | 0.015 | 0.015 | 0.27 | 1.20 | 0.11 | 0.46 | 0.11 | 0.46 | 99% | 0.00273 | 0.011957 | 0.00105 | 0.004599 | 0.00105 | 0.004599 |
| Hopper Loading | 7.0 | 0.0051 | 0.0024 | 0.0024 | 0.04 | 0.16 | 0.02 | 0.07 | 0.02 | 0.07 | 99% | 0.000357 | 0.001564 | 0.000168 | 0.000736 | 0.000168 | 0.000736 |
| **Total** | | | | | **0.73** | **3.20** | **0.28** | **1.21** | **0.28** | **1.21** | | **0.01** | **0.03** | **0.00** | **0.01** | **0.00** | **0.01** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Hopper Loading emission factor is for Weight Hopper Loading for Concrete Batching [3-05-011-08] found at AP-42 Table 11-12-2
Impactor and crusher emission factors are for Secondary Crushing for Stone Quarries [3-05-020-02] found in FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)
where E = emissions in lbs/hr
P = process weight in tons/hr
P = 14000 lbs/hr
= 7.00 tons/hr

Allowable PM Emissions, E = 15.10 lbs/hr
= 362.4 lbs/day
= 66.1 tons/yr

The use of a baghouse ensures compliance with the above limit.

**Company Name:** **Melt Solutions**
**Address City IN Zip:** **201 East Charles Street, Marion, IN 46952**
**Permit Number:** **M053-30100-00071**
**Reviewer:** **Deborah Cole**
**Date:** **3/3/2010**

| | Emission Factors | | | | Emissions | | | | | | | Controlled | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | Capacity | PM | PM10 | PM2.5 | PM | | PM10 | | PM2.5 | | Control | PM | | PM10 | | PM2.5 | |
| | (ton/hour) | (lb/ton) | (lb/ton) | (lb/ton) | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr | | lb/hr | ton/yr | lb/hr | ton/yr | lb/hr | ton/yr |
| **Ball Mill (2011)** | 12 | 0.025 | 0.0087 | 0.0087 | 0.30 | 1.31 | 0.10 | 0.46 | 0.10 | 0.46 | 99% | 0.00025 | 0.001095 | 0.0001 | 0.000381 | 0.0001 | 0.000381 |
| **Total** | | | | | **0.30** | **1.31** | **0.10** | **0.46** | **0.10** | **0.46** | | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

Methodology:
Potential Emissions (tpy) = Capacity (tons/hr) x 1 ton/2000 lbs x Emission Factor (lb/ton sand) x 8760 hrs/yr x 1 ton/2000 lbs

Impactor and crusher emission factors are for Secondary Crushing for Stone Quarries [3-05-020-02] found in FIRE

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr
P = 24000 lbs/hr
= 12.00 tons/hr

Allowable PM Emissions, E = 21.67 lbs/hr
= 520.1 lbs/day
= 94.9 tons/yr

The use of a baghouse ensures compliance with the above limit.

**Appendix A: Emission Calculations**
**Fugitive Dust Emissions - Paved Roads**

**Company Name:** Melt Solutions
**Source Address:** 201 East Charles Street, Marion, IN 46952
**Permit Number:** M053-30100-00071
**Reviewer:** Deborah Cole
**Date:** 3/3/2010

**Paved Roads at Industrial Site**
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

| Type | Maximum number of vehicles per day | Number of one-way trips per day per vehicle | Maximum trips per day (trip/day) | Maximum Weight Loaded (tons/trip) | Total Weight driven per day (ton/day) | Maximum one-way distance (feet/trip) | Maximum one-way distance (mi/trip) | Maximum one-way miles (miles/day) | Maximum one-way miles (miles/yr) |
|---|---|---|---|---|---|---|---|---|---|
| Vehicle (entering plant) (one-way trip) | 7.0 | 7.0 | 49.0 | 62.0 | 3038.0 | 90 | 0.017 | 0.8 | 304.9 |
| | | **Total** | **49.0** | | **3038.0** | | | **0.8** | **304.9** |

Average Vehicle Weight Per Trip = 62.0 tons/trip
Average Miles Per Trip = 0.02 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

| | PM | PM10 | PM2.5 | |
|---|---|---|---|---|
| where k = | 0.011 | 0.0022 | 0.00054 | lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1) |
| W = | 62.0 | 62.0 | 62.0 | tons = average vehicle weight (provided by source) |
| sL = | 9.7 | 9.7 | 9.7 | g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3) |

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

| PM | PM10 | PM2.5 | |
|---|---|---|---|
| 5.856 | 1.171 | 0.2875 | lb/mile |
| 5.355 | 1.071 | 0.2629 | lb/mile |
| 50% | 50% | 50% | (pursuant to control measures outlined in fugitive dust control plan) |
| | | | Delete dust control efficiency if there is no fugitive dust control plan |

| Process | Unmitigated PTE of PM (tons/yr) | Unmitigated PTE of PM10 (tons/yr) | Unmitigated PTE of PM2.5 (tons/yr) | Mitigated PTE of PM (tons/yr) | Mitigated PTE of PM10 (tons/yr) | Mitigated PTE of PM2.5 (tons/yr) |
|---|---|---|---|---|---|---|
| Vehicle (entering plant) (one-way trip) | 0.89 | 0.18 | 0.04 | 0.82 | 0.16 | 0.04 |
| | **0.89** | **0.18** | **0.04** | **0.82** | **0.16** | **0.04** |

**Methodology**
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

**Abbreviations**
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

**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: Mike Dunn
Melt Solutions
201 E. Charles St
Marion, IN 46952

DATE: July 12, 2011

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

SUBJECT: Final Decision
New Source Construction & Minor Source Operating Permit
053-30100-00071

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:
Erin Surinak – Environmental Resources Management (ERM)
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.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
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Toll Free (800) 451-6027
**www.idem.IN.gov**

July 12, 2011

TO: Marion Public Library

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

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

**Applicant Name:** **Melt Solutions**
**Permit Number:** **053-30100-00071**

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 | GHOTOPP 7/12/2011<br>Melt Solutions 053-30100-00071 Final | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
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| Name and address of Sender | ▶ | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** |

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| 1 | | Mike Dunn Melt Solutions 201 E Charles St Marion IN 46952 (Source CAATS) via confirmed delivery | | | | | | | | | |
| 2 | | Marion City Council and Mayors Office 301 S. Branson Street Marion IN 46952-4052 *(Local Official)* | | | | | | | | | |
| 3 | | Grant County Commissioners 401 South Adams Marion IN 46953 *(Local Official)* | | | | | | | | | |
| 4 | | Ms. Mary Shipley 10968 E 100 S Marion IN 46953 *(Affected Party)* | | | | | | | | | |
| 5 | | Grant County Health Department 401 S. Adams St, Courthouse Complex Marion IN 46953-2031 *(Health Department)* | | | | | | | | | |
| 6 | | Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 *(Affected Party)* | | | | | | | | | |
| 7 | | Erin Surinak Environmental Resources Management (ERM) 11350 N Meridian Street Suite 320 Carmel IN 46032 *(Consultant)* | | | | | | | | | |
| 8 | | Marion Public Library 600 S Washington St Marion IN 46953 *(Library)* | | | | | | | | | |
| 9 | | Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 *(Affected Party)* | | | | | | | | | |
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