



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: October 19, 2009

RE: HARSCO - Reed Minerals / 089 - 27389 - 00107

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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**Federally Enforceable State Operating Permit
Renewal
OFFICE OF AIR QUALITY**

**HARSCO Corporation - Reed Minerals Division
7100 West 9th Avenue
Gary, Indiana 46406**

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

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

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

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F089-27389-00107	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 19, 2009 Expiration Date: October 19, 2019

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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 - General Information through A.4 - Insignificant Activities is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary Slag processing plants.

Source Address:	7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address:	P.O. Box 0515, Camp Hill, PA 17001
General Source Phone Number:	219-944-6256
SIC Code:	3295
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

This slag processing company consists of two (2) plants at this location:

- (a) Reed Minerals – Plant 14 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9th Avenue, Gary, Indiana 46406 (SIC: 3295), receiving boiler slag from power plants and producing roofing granules and abrasive grit; and
- (b) Reed Minerals – Plant 24 (Plant ID: #089-05242), a stationary slag processing plant, located at 7100 West 9th Avenue, Gary, Indiana 46406 (SIC: 3295), processing blast furnace slag and producing roofing granules.

Since the two (2) plants are located on the same property, have the same SIC codes, and are owned by one (1) company, they will be considered one (1) source, effective from the date of issuance of FESOP permit number 089-16215-00107, issued August 9, 2009, and modified with the issuance of FESOP permit number 089-25064-00107, issued March 17, 2008.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:
 - (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14. Note: This Natural Gas rotary dryer replaced the fluidized bed dryer.
 - (2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This

area consists of the following:

- (i) Three (3) crushers, identified as P03-14;
 - (ii) Eleven (11) screens, identified as P02-14;
 - (iii) Eight (8) bucket elevators, identified as M01-14;
 - (iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
 - (v) Six (6) blend silos, identified as M03-14;
 - (vi) Three (3) roofing silos, identified as M05-14;
 - (vii) Eight (8) blasting silos, identified as M04-14; and
 - (viii) One (1) chute to blasting silos, identified as M06-14.
- (3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:
- (i) One (1) loading hopper;
 - (ii) Three (3) conveyor transfer points; and
 - (iii) One (1) initial screening operation;
- (4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and
- (5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.
- (b) Plant 24 consisting of one (1) stationary slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consists of the following:
- (1) One (1) feed hopper;
 - (2) Two (2) conveyors to the dryer, identified as M01-24 and M02-24;
 - (3) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (4) One (1) conveyor to chute, identified as M03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (5) One (1) chute to the screen, identified as M04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (6) One (1) conveyor to the bucket elevator, identified as M05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (7) One (1) QC screen, identified as P03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;

- (8) One (1) bucket elevator, identified as M06-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- (9) One bucket elevator, identified as M07-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- (10) Two (2) bucket elevators, identified as M08-24 and M09-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- (11) One (1) crusher, identified as P04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24; and
- (12) One (1) J&H Hummer screen, identified as P05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
- (c) Cleaners and solvents characterized as having a vapor pressure less than or equal to seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F) the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month periods;
- (d) Combustion source flame safety purging on startup;
- (e) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Refractory storage not requiring air pollution control equipment;
- (h) Paved and unpaved roads and parking lots with public access;
- (i) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;
- (j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (k) Purge double block and bleed valves;
- (l) Other emission units, not regulated by a NESHAP, with PM₁₀ and SO₂ emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a

single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

- (1) One (1) coal slag pile, with a maximum capacity of 500,000 tons;
- (2) One (1) fines pile, with a maximum capacity of 200,000 tons;
- (3) Five (5) slag storage tanks, constructed in 2004;
- (4) One (1) blast furnace slag pile;
- (5) Two (2) temporary fines piles;
- (6) Two (2) wet screws;
- (7) Two (2) front end loading activities to move raw materials and fines;
- (8) One (1) load out to truck;
- (9) Six (6) storage silos;
- (10) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside;
- (11) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture; and
- (12) One (1) oversize storage pile with a maximum capacity of 20,000 tons.

A.5 FESOP Applicability [326 IAC 2-8-2]

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

SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

- (a) This permit, F089-27389-00107, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-8-4(4)]

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

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

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

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

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This

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

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.
 - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

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

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

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

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

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

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

(a) All terms and conditions of permits established prior to F089-27389-00107 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
- (2) revised, or
- (3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

- (1) That this permit contains a material mistake.
- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to

assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

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

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.

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

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Overall Source Limit [326 IAC 2-8]

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

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. This limitation will also make the requirements of 326 IAC 2-3 (Emission Offset) not applicable;
 - (2) The potential to emit any regulated pollutant from the entire source, except particulate matter (PM) and volatile organic compounds (VOCs), shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;
 - (3) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (4) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation will also make the requirements of 326 IAC 2-2 (PSD) not applicable.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

Compliance with all limitations with the limited PTE from all emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per year, and PM10, PM2.5, CO, VOC, and SO2 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of twenty percent (20%) 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.3 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.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

C.5 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.6 Fugitive Dust Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

- (k) The PM₁₀ emissions from each material processing stack shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (l) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.
- (m) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
 - (1) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (2) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).
- (n) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

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

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

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

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

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

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

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

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported, except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the scheduled stated in the applicable requirement and does not need to be included in this report. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of this permit.
- (b) The report required in (a) of this condition and 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
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Plant 14

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:
- (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14. Note: this Natural Gas rotary dryer replaced the fluidized bed dryer.
 - (2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:
 - (i) Three (3) crushers, identified as P03-14;
 - (ii) Eleven (11) screens, identified as P02-14;
 - (iii) Eight (8) bucket elevators, identified as M01-14;
 - (iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
 - (v) Six (6) blend silos, identified as M03-14;
 - (vi) Three (3) roofing silos, identified as M05-14;
 - (vii) Eight (8) blasting silos, identified as M04-14; and
 - (viii) One (1) chute to blasting silo, identified as M06-14;
 - (3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:
 - (i) One (1) loading hopper;
 - (ii) Three (3) conveyor transfer points;
 - (iii) One (1) initial screening operation.
 - (4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and
 - (5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.

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

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

D.1.1 PM, PM10, and PM2.5 Limitations [326 IAC 2-8] [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable, the Permittee shall

comply with the following requirements:

<u>Process / Emission Unit</u>	<u>PM</u>	<u>PM10</u>	<u>PM2.5</u>
	<u>Limit</u> (pounds per hour)	<u>Limit</u> (pounds per hour)	<u>Limit</u> (pounds per hour)
Plant 14 Slag Processing			
Rotary Dryer, P01-14 with wet scrubber, CE01-14	3.5	3.5	3.5
<u>Enclosed Dry Slag Process</u> (all controlled by Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	3.5	3.5	7.5
(all controlled by Baghouse C02-14): Bucket elevators (8) -M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14			
<u>Raw Slag Handling</u> (all uncontrolled) Loading Hopper LH01-14	1.0	1.0	0.5
Conveyor Transfer Points (3) TP01-14a thru c	0.5 each	0.5 each	0.11 each
Initial Screening IS01-14	1.0	1.0	0.5

Compliance with these limits, combined with the PM, PM10, and PM2.5 emissions from Plant 24, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10 and PM2.5. Therefore, this source is a minor source under 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

D.1.2 PM10 Limitations [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-29, the PM10 emissions from the Plant 14 crushing and screening operations shall not exceed:

<u>Process / Emission Unit</u>	<u>PM10 Limit</u>
Plant 14 Slag Processing	
<u>Enclosed Dry Slag Process</u> (controlled by Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	9.0 pound per hour 0.015 grain per dry standard cubic foot

D.1.3 PM Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from the Plant 14 rotary dryer P01-14, the enclosed dry slag processing operation, and the raw slag handling operation shall exceed:

<u>Process / Emission Unit</u>	<u>326 IAC 6.8-1-2</u>
	<u>PM Limit</u>
Plant 14	(grain per dry standard cubic foot)
One (1) natural as-fired rotary dryer, identified as P01-14, with wet scrubber as control.	0.03
<u>Enclosed Dry Slag Process</u> (all controlled by Baghouse C02-14) Bucket elevators (8) -M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14	0.03
<u>Raw Slag Handling</u> (all uncontrolled) Loading Hopper LH01-14 Conveyor Transfer Points (3) - TP01-14a thru c Initial Screening IS01-14	0.03

D.1.4 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]

Pursuant to 326 IAC 6.8-11, upon notification from IDEM, OAQ that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.6 PM, PM10, and PM2.5 Control [326 IAC 2-8-5(a)(4)]

(a) In order to comply with Conditions D.1.1 - PM, PM10, and PM2.5 Limitations, D.1.2 - PM10 Limitations, and D.1.3 - PM Limitations, scrubber CE01-14 controlling the PM, PM10, and PM2.5 emissions from the dryer P01-14, and baghouse CE02-14 controlling the PM, PM10, and PM2.5 emissions from the dry slag processing area shall be in operation and control PM, PM10, and PM2.5 emissions at all times that these units are in operation.

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]

Pursuant to 326 IAC 2-8-5(1), and in order to demonstrate compliance with Conditions D.1.1 - PM, PM10, and PM2.5 Limitations, D.1.2 - PM10 Limitations, and D.1.3 - PM Limitations, the Permittee shall perform testing as follows:

- (a) In order to demonstrate compliance with Condition D.1.1 - PM, PM10, and PM2.5 Limitations, the Permittee shall perform PM testing of the dryer utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.
- (b) In order to demonstrate compliance with Condition D.1.1 - PM, PM10, and PM2.5 Limitations, the Permittee shall perform PM2.5 and PM10 testing on the dryer within 180 days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program

for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, or five (5) years from the most recent valid compliance stack test, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM10 and PM2.5 includes filterable and condensible PM.

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

D.1.8 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts from the scrubber, baghouse and each of the raw slag handling operations (including the hopper, the conveyor transfer points, and the initial screening facility) shall be performed once per day 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, at least 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.1.9 Parametric Monitoring

- (a) The Permittee shall monitor and record the pressure drop and the flow rate for scrubber CE01-14 at the frequency specified in the table below, when the dryer P01-14 is in operation. Unless operated under conditions for which the Response to Excursions or Exceedances specifies otherwise, the pressure drop across the scrubber and the flow rate shall be maintained with the ranges listed in the table below or determined during the latest compliant stack test:

Scrubber ID	Monitoring Frequency	Pressure Drop Range (inches of water)	Minimum Flow Rate (gallons per minute)
CE01-14	Continuous	6.0 – 10.0	225

When for any one reading, the pressure reading is outside the above mentioned range or the flow rate is below the above mentioned minimum, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions or Exceedances.

- (b) The Permittee shall record the pressure drop across baghouse CE02-14, used in conjunction with the dry slag processing area, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

D.1.10 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.11 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 the emission unit. 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's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.12 Record Keeping Requirements

- (a) To document compliance with Condition D.1.8 - Visible Emissions Notations, the Permittee shall maintain a once per day record of visible emission notations of each of the stack exhausts from the scrubber, baghouse and each of the raw slag handling operations. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.1.9(a) - Parametric Monitoring, the Permittee shall maintain the following parameters for the scrubber during normal operation:
 - (1) The pressure drop; and
 - (2) Flow rate.
- (c) To document compliance with Condition D.1.9(b) - Parametric Monitoring, the Permittee shall maintain a once per day record of the pressure drop during normal operation for the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Plant 24

- (a) Plant 24 consisting of one (1) stationary slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:
- (1) One (1) feed hopper;
 - (2) Two (2) conveyors to the dryer, identified as M01-24 and M02-24;
 - (3) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (4) One (1) conveyor to chute, identified as M03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (5) One (1) chute to the screen, identified as M04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (6) One (1) conveyor to the bucket elevator, identified as M05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (7) One (1) QC screen, identified as P03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (8) One (1) bucket elevator, identified as M06-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (9) One bucket elevator, identified as M07-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (10) Two (2) bucket elevators, identified as M08-24 and M09-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (11) One (1) crusher, identified as P04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24; and
 - (12) One (1) J&H Hummer screen, identified as P05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.

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

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

D.2.1 PM, PM10, and PM2.5 Limitations [326 IAC 2-8] [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable, the Permittee shall comply with the following requirements:

Process / Emission Unit	PM	PM10	PM2.5
	Limit (pounds per hour)	Limit (pounds per hour)	Limit (pounds per hour)
Plant 24 Slag Processing			
(all controlled by Baghouse C02-24) Rotary Dryer P01-24	3.5	3.5	3.5
(all controlled by Baghouse C02-24) Conveyors (2) -M03-24, M05-24 Chute to screen M04-24 Screens (2) -P03-24, P05-24 Bucket elevators (4) -M06-24, M07-24 -M08-24, M09-24 Crusher P04-24	6.05	6.05	5.98
Uncontrolled Units			
Feed Hopper FH01-24	0.25	0.25	0.05
Conveyors (2) -M01-24, M02-24	0.10 each	0.10 each	0.04 each

Combined with the PM, PM10, and PM2.5 emissions from Plant 14, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10 and PM2.5. Therefore, this source is a minor source under 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5, and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

D.2.2 PM Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, particulate matter (PM) emissions from each unit of the slag processing operation of Plant 24 shall not exceed the following:

Process / Emission Unit	326 IAC 6.8-1-2
	PM Limit
Plant 24 Slag Processing	(grain per dry standard cubic foot)
(all controlled by Baghouse C02-24): Rotary Dryer P01-24 Conveyors (2) -M03-24, M05-24 Chute to screen M04-24 Screens (2) -P03-24, P05-24 Bucket elevators (4) -M06-24, M07-24, M08-24, M09-24 Crusher P04-24	0.03
Uncontrolled Units	
Feed Hopper FH01-24 Conveyors (2) -M01-24, M02-24	0.03

D.2.3 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]

Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ, that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.2.5 PM, PM10, and PM2.5 Control [326 IAC 2-8-5(a)(4)]

- (a) In order to comply with Condition D.2.1 - PM, PM10, and PM2.5 Limitations, baghouse CE01-24 shall be in operation and control PM, PM10, and PM2.5 emissions at all times that the dryer or the slag handling processes are in operation.

D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 2-8-5(1), and in order to demonstrate compliance with Condition D.2.1 the Permittee shall perform testing as follows:

- (a) In order to demonstrate compliance with Condition D.2.1 - PM, PM10, and PM2.5 Limitations, the Permittee shall perform PM testing of the dryer/mixer utilizing methods approved by the Commissioner.
- (b) In order to demonstrate compliance with Conditions D.2.1 - PM, PM10, and PM2.5 Limitations, the Permittee shall perform PM2.5 and PM10 testing on the dryer within 180 days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, or five (5) years from the most recent valid compliance stack test, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM10 and PM2.5 includes filterable and condensible PM.

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

D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the exhaust from baghouse CE01-24 shall be performed once per day 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, at least 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.2.8 Parametric Monitoring

The Permittee shall record the pressure drop across baghouse CE01-24 used in conjunction with the dryer and the slag handling operations, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range as listed in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not

a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE01-24	3.0 – 5.5

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

D.2.9 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 the emission unit. 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's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.10 Record Keeping Requirements

- (a) To document compliance with Conditions D.2.7 - Visible Emissions Notations, the Permittee shall maintain a once per day record of visible emissions from the stack exhaust from baghouse CE01-24. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.2.8 - Parametric Monitoring, the Permittee shall maintain a once per day record of the pressure drop during normal operation for the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

FACILITY CONDITIONS

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

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
- (c) Cleaners and solvents characterized as having a vapor pressure less than or equal to seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F)) the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month periods;
- (d) Combustion source flame safety purging on startup;
- (e) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Refractory storage not requiring air pollution control equipment;
- (h) Paved and unpaved roads and parking lots with public access;
- (i) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;
- (j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (k) Purge double block and bleed valves;
- (l) Other emission units, not regulated by a NESHAP, with PM₁₀ and SO₂ emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
 - (1) Coal slag piles, with a maximum capacity of 500,000 tons;
 - (2) Fines piles, with a maximum capacity of 200,000 tons;
 - (3) Five (5) slag storage tanks, constructed in 2004;
 - (4) One (1) blast furnace slag pile;
 - (5) Two (2) temporary fines piles;
 - (6) Two (2) wet screws;
 - (7) Two (2) front end loading activities to move raw materials and fines;
 - (8) One (1) load out to truck;
 - (9) Six (6) storage silos;

- (10) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside;
- (11) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture; and
- (12) One (1) oversize storage pile with a maximum capacity of 20,000 tons.

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

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

There are no applicable state or federal requirements for these units.

SECTION E.1

FACILITY CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Natural Gas-Fired Dryers

- (a) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14; and
- (b) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24.

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryers P01-14 and P01-24, except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries). Provisions of NSPS Subpart UUU are contained in Attachment B of this permit.

E.1.2 NSPS Subpart UUU Requirements - Standards of Performance for Calciners and Dryers in Mineral Industries [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant 40 CFR Part 60, Subpart UUU, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart UUU, which are incorporated by reference as 326 IAC 12-1 for the slag processing plant as specified in Attachment B of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: HARSCO Corporation - Reed Minerals Division
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 0515, Camp Hill, PA 17001
FESOP Permit No.: F089-27389-00107

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

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

Source Name: HARSCO Corporation - Reed Minerals Division
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 0515, Camp Hill, PA 17001
FESOP Permit No.: F089-27389-00107

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Source Name: HARSCO Corporation - Reed Minerals Division
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 0515, Camp Hill, PA 17001
FESOP Permit No.: F089-27389-00107

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

Page 1 of 2

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

ATTACHMENT A: FUGITIVE DUST CONTROL PLAN
HARSCO – Reed Minerals Division
7100 West 9th Avenue, Gary, Indiana
FESOP No.: 089-16215-00107

Background

Fugitive dust sources of significance from this site can be categorized into three groups: roadways, fines, stockpiles, and inactive ground level areas not dedicated to any particular use.

Total site size is 36.4 acres unpaved with 10,560 yd² of unpaved roadway (.6mi. x 10 yds). This plan expects to control fugitive emissions at 92.0% reduction.

Plan of Control

A. Person responsible for plan implementation:

Plant Superintendent
7100 West 9th Avenue
Gary, Indiana
(219) 923-4200

B. Roadway Control Measures

1. All active entrance roadways will be clearly marked and traffic will be restricted to controlled areas.
2. All vehicles shall not exceed 5 mph.
3. All active roadways will be inspected daily to assure nominal thickness (2") of coarse aggregate oversize is maintained on all traffic areas. Required material will be placed by an on site front loader and/or dump truck.
4. Monthly representative roadway aggregate samples will be taken and analyzed to assure silt content (200 mesh) is less than 3%.

C. Fines stockpile control measures

Note: Raw material stockpiles are exempt from this plan, because silt content is .2% and moisture content is typical 5%.

1. Storage pile height shall be limited to 50 feet.
2. End loader bucket drop height will be minimized to the lowest practical elevation.
3. Water will be applied to fines stockpiles to control fugitive dust when necessary.
4. Water will not be applied to fines stockpiles when the following conditions prevail.
 - a. During freezing weather, typically between October 15 and April 15.
5. RMD completed a "green belt" alternatives study for fugitive dust control as follows:
 - a. Summer 1986 (June 1 – August 31) Select landscape consultant.

- b. Fall 1986 (September 1 – October 31) Implement vegetative growth test areas.
- c. Winter 1986 (November 1 – February 28) Inspect test areas, Document growth progress, Reseed winter damaged areas.
- d. Spring 1987 (March 1 – May 30) Continue documentation of growth areas. Monitor and document progress.
- e. Summer 1987 (June 1 – August 31) Review test program. Determine the most viable method of establishing a green belt on site. Prepare for Phase I implementation.
- f. Fall 1987 (September 1 – October 31) Review test areas and evaluate results. Implement Phase I green belt control plan.
- g. Spring 1988 (March 1 – April 30) Review and evaluate implementation of green belt project. Prepare to implement Phase II construction of green belt. Repair any winter damage.
- h. Fall 1988 (May 1 – October 31) Implement Phase II green belt construction.
- i. Spring 1989 (March 1 – May 31) Review control plan and determine whether additional controls are required.

D. Open areas (Inactive)

- 1. All such classified areas will be closed to truck traffic, except by special permit.
- 2. Natural vegetative encroachment will be allowed and promoted. Green belt establishment such as this forbids the use of surface control chemicals which contaminate the existing surface and/or prevent vegetative root penetration.
- 3. All open areas with the greatest potential for reactivation as storage for fines will be covered with oversize aggregate, as set forth in the roadway control measures.

E. Records shall be kept and maintained which document all control measures and activities to be implemented in accordance with the approved control plan. Said records shall be available upon the request of the Indiana Department of Environmental Management or the Gary Department of Environmental Affairs, and shall be retained for three (3) years.

F. Plan Implementation

The effective date of this plan was August 1, 1986.

Date of update: March 04, 2008.

**ATTACHMENT B: New Source Performance Standards (NSPS)
40 CLR Part 60, Subpart UUU, Calciners and Dryers in Mineral Industries**

**For
HARSCO Corporation – Reed Minerals Division
7100 West 9th Avenue, Gary, Indiana 46406
FESOP No.: 089-27389-00107**

Subpart UUU—Standards of Performance for Calciners and Dryers in Mineral Industries

Source: 57 FR 44503, Sept. 28, 1992, unless otherwise noted.

§ 60.730 *Applicability and designation of affected facility.*

(a) The affected facility to which the provisions of this subpart apply is each calciner and dryer at a mineral processing plant. Feed and product conveyors are not considered part of the affected facility. For the brick and related clay products industry, only the calcining and drying of raw materials prior to firing of the brick are covered.

(b) An affected facility that is subject to the provisions of subpart LL, Metallic Mineral Processing Plants, is not subject to the provisions of this subpart. Also, the following processes and process units used at mineral processing plants are not subject to the provisions of this subpart: vertical shaft kilns in the magnesium compounds industry; the chlorination-oxidation process in the titanium dioxide industry; coating kilns, mixers, and aerators in the roofing granules industry; and tunnel kilns, tunnel dryers, apron dryers, and grinding equipment that also dries the process material used in any of the 17 mineral industries (as defined in §60.731, "Mineral processing plant").

(c) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after April 23, 1986, is subject to the requirements of this subpart.

§ 60.731 *Definitions.*

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Calciner means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating. This definition includes expansion furnaces and multiple hearth furnaces.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities.

Dryer means the equipment used to remove uncombined (free) water from mineral material through direct or indirect heating.

Installed in series means a calciner and dryer installed such that the exhaust gases from one flow through the other and then the combined exhaust gases are discharged to the atmosphere.

Mineral processing plant means any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

§ 60.732 *Standards for particulate matter.*

Each owner or operator of any affected facility that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test required by

§60.8 is completed, but not later than 180 days after the initial startup, whichever date comes first. No emissions shall be discharged into the atmosphere from any affected facility that:

- (a) Contains particulate matter in excess of 0.092 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)] for calciners and for calciners and dryers installed in series and in excess of 0.057 g/dscm (0.025 gr/dscf) for dryers; and
- (b) Exhibits greater than 10 percent opacity, unless the emissions are discharged from an affected facility using a wet scrubbing control device.

[57 FR 44503, Sept. 28, 1992, as amended at 65 FR 61778, Oct. 17, 2000]

§ 60.733 Reconstruction.

The cost of replacement of equipment subject to high temperatures and abrasion 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. Calciner and dryer equipment subject to high temperatures and abrasion are: end seals, flights, and refractory lining.

§ 60.734 Monitoring of emissions and operations.

(a) With the exception of the process units described in paragraphs (b), (c), and (d) of this section, the owner or operator of an affected facility subject to the provisions of this subpart who uses a dry control device to comply with the mass emission standard shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the control device.

(b) In lieu of a continuous opacity monitoring system, the owner or operator of a ball clay vibrating grate dryer, a bentonite rotary dryer, a diatomite flash dryer, a diatomite rotary calciner, a feldspar rotary dryer, a fire clay rotary dryer, an industrial sand fluid bed dryer, a kaolin rotary calciner, a perlite rotary dryer, a roofing granules fluid bed dryer, a roofing granules rotary dryer, a talc rotary calciner, a titanium dioxide spray dryer, a titanium dioxide fluid bed dryer, a vermiculite fluid bed dryer, or a vermiculite rotary dryer who uses a dry control device may have a certified visible emissions observer measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.

(c) The owner or operator of a ball clay rotary dryer, a diatomite rotary dryer, a feldspar fluid bed dryer, a fuller's earth rotary dryer, a gypsum rotary dryer, a gypsum flash calciner, gypsum kettle calciner, an industrial sand rotary dryer, a kaolin rotary dryer, a kaolin multiple hearth furnace, a perlite expansion furnace, a talc flash dryer, a talc rotary dryer, a titanium dioxide direct or indirect rotary dryer or a vermiculite expansion furnace who uses a dry control device is exempt from the monitoring requirements of this section.

(d) The owner or operator of an affected facility subject to the provisions of this subpart who uses a wet scrubber to comply with the mass emission standard for any affected facility shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber. The pressure loss monitoring device must be certified by the manufacturer to be accurate within 5 percent of water column gauge pressure at the level of operation. The liquid flow rate monitoring device must be certified by the manufacturer to be accurate within 5 percent of design scrubbing liquid flow rate.

§ 60.735 Recordkeeping and reporting requirements.

(a) Records of the measurements required in §60.734 of this subpart shall be retained for at least 2 years.

(b) Each owner or operator who uses a wet scrubber to comply with §60.732 shall determine and record once each day, from the recordings of the monitoring devices in §60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid.

(c) Each owner or operator shall submit written reports semiannually of exceedances of control device operating parameters required to be monitored by §60.734 of this subpart. For the purpose of these reports, exceedances are defined as follows:

- (1) All 6-minute periods during which the average opacity from dry control devices is greater than 10 percent; or
 - (2) Any daily 2-hour average of the wet scrubber pressure drop determined as described in §60.735(b) that is less than 90 percent of the average value recorded according to §60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard; or
 - (3) Each daily wet scrubber liquid flow rate recorded as described in §60.735(b) that is less than 80 percent or greater than 120 percent of the average value recorded according to §60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard.
- (d) 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 Clean Air Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with this section provided that they comply with the requirements established by the State.

[57 FR 44503, Sept. 28, 1992, as amended at 58 FR 40591, July 29, 1993]

§ 60.736 Test methods and procedures.

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
- (b) The owner or operator shall determine compliance with the particulate matter standards in §60.732 as follows:
- (1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm.
 - (2) Method 9 and the procedures in §60.11 shall be used to determine opacity from stack emissions.
- (c) During the initial performance test of a wet scrubber, the owner or operator shall use the monitoring devices of §60.734(d) to determine the average change in pressure of the gas stream across the scrubber and the average flowrate of the scrubber liquid during each of the particulate matter runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of §60.735(c).

§ 60.737 Delegation of authority.

- (a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.
- (b) Authorities which will not be delegated to States: No restrictions.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Federally Enforceable State Operating Permit Renewal

Source Background and Description

Source Name: HARSCO Corporation - Reed Minerals Division
Source Location: 7100 West 9th Avenue, Gary, Indiana 46406
County: Lake
SIC Code: 3295
Permit Renewal No.: 089-27389-00107
Permit Reviewer: Jack Harmon

On September 11, 2009, the Office of Air Quality (OAQ) had a notice published in the Gary Post Tribune, Merrillville, Indiana, and The Times, Munster, Indiana, stating that HARSCO Corporation - Reed Minerals Division had applied for a FESOP Renewal to renew its operating permit relating to the operation of two stationary slag processing plants. The notice also stated that the OAQ proposed to issue a FESOP Renewal 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

On October 5, 2009, Hatchett & Hauck LLP, on behalf of HARSCO Corporation - Reed Minerals Division, submitted comments to IDEM, OAQ on the draft permit renewal.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Section D.1 (Facility Description): the source requests the addition of the following emission units to be added to the description, as follows:

- (4) **Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and**
- (5) **One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.**

Response to Comment 1:

IDEM agrees with the recommended changes. The referenced emission units are included in Section A.3 of the Permit, in the calculations shown in Appendix A, and in the Technical Support Document, but were inadvertently omitted from Section D.1 of the permit. The permit has been revised as requested above.

Comment 2:

Condition D.1.2 (PM10 Limitations): the source requests that the limit imposed on the emissions of the rotary dryer (P01-14) be deleted because it was determined in a previous permit action (Second Permit Revision No. 089-25064-00107, issued March 17, 2008) that the limit was not applicable to this emission unit.

Response to Comment 2:

IDEM agrees with the recommended change. A review of the previous permit action referenced above, indicated that the emission unit described in 326 IAC 6.8-2-29, the Plant 14 fluidized bed dryer, was removed from the source in April, 2006. It was replaced by the natural gas-fired rotary dryer, identified as P01-14, in April, 2006. This replacement unit is not subject the 326 IAC 6.8-2-29. The permit has been changed as shown below.

However, since the rotary dryer P01-14 is no longer subject to 326 IAC 6.8-2-29, it is now subject to 326 IAC 6.8-1-2(a), and the natural gas-fired rotary dryer should be added to Condition D.1.3 (PM Limitations), as shown below:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:
 - (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14. **Note: This Natural Gas rotary dryer replaced the fluidized bed dryer.**

D.1 Facility Description [326 IAC 2-8-4(10)]: Plant 14

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:
 - (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14. **Note: This Natural Gas rotary dryer replaced the fluidized bed dryer.**

D.1.2 PM10 Limitations [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-29, the PM10 emissions from the Plant 14 crushing and screening operations ~~and the rotary dryer~~ shall not exceed:

<u>Process / Emission Unit</u>	<u>PM10 Limit</u>
Plant 14 Slag Processing	
Rotary Dryer, P01-14, with wet scrubber, CE01-14	3.5 pound per hour 0.015 grain per dry standard cubic foot
<u>Enclosed Dry Slag Process</u> (controlled by Baghouse C02-14)	
Crushers P03-14a thru c Screens P02-14a thru k	9.0 pound per hour 0.015 grain per dry standard cubic foot

D.1.3 PM Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from the Plant 14 rotary dryer P01-14, the enclosed dry slag processing operation, and the raw slag handling operation shall exceed:

<u>Process / Emission Unit</u>	<u>326 IAC 6.8-1-2 PM Limit</u>

Plant 14	(grain per dry standard cubic foot)
One (1) natural gas-fired rotary dryer, identified as P01-14, with wet scrubber as control.	0.03
Enclosed Dry Slag Process (all controlled by Baghouse C02-14) ---	0.03
Raw Slag Handling (all uncontrolled) ---	0.03

Comment 3:

D.1.3 (PM Limitations): the source has requested three items:

- (a) The source requests the deletion of the "Enclosed Dry Slag Process" consistent with the current permit;
- (b) The source requests that 326 IAC 6.8-1-2 does not apply to the "Raw Slag Handling" operation because it is a fugitive source; and
- (c) The source requests that the PM limit of 0.03 gr/dscf be added to condition to Condition D.1.3 for the rotary dryer P-01-14.

Response to Comment 3:

- (a) IDEM disagrees with this request. The current permit identifies this process as Enclosed Dry Slag Process. The Enclosed Dry Slag Process is subject to the same requirements of 326 IAC 6.8-1-2 as the dryer and the rest of the process. There will be no change to the permit;
- (b) IDEM disagrees with this request. This permit is consistent with the existing permit. The current permit does not identify this Raw Slag Handling process as fugitive, and imposes limits under 326 IAC 6.8-1-2. The permit limits are consistent with the current permit, and the source has not indicated that there is any change to the process. Additionally, OAQ makes a distinction between uncontrolled emissions and fugitive emissions. Uncontrolled emissions means there are no control devices to capture or otherwise reduce emissions from a unit. A fugitive emission is one that cannot be reasonably captured. These uncontrolled units are conveyance and hoppers, items which, traditionally, can be controlled or captured. Therefore, they are not considered as fugitive emissions. There will be no change to the permit.
- (c) See IDEM response to Comment 2 above.

Comment 4:

Technical Support Document: the source requests that the Potential to Emit After Issuance Table be revised to more accurately reflect the totals listed on the Summary Sheet of the Calculations sheets shown on Page 1 of Appendix A, for the Plant 24 rotary dryer and for Plant 24 Slag Processing.

Response to Comment 4:

IDEM agrees that the Table referenced above should be changed to correct typographical errors on the tons per year emission levels. However, as stated in Paragraph Two of this section, the Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but this Addendum to the Technical Support Document shows the correction as follows:

Process/Emission Unit	Potential to Emit (tons/yr)							
	PM	PM-10	PM-2.5	SO ₂	NOx	VOC	CO	HAPs

Plant 24 Dryer	15.303	15.303	15.303	0.03	5.30	0.29	4.42	0.01
Plant 24 Slag Processing	26.50	26.50	26.18	0.030	5.300	0.290	4.420	0.10

Comment 5:

Technical Support Document: the source requests that the State Rule Applicability Table for 326 IAC 2-8 (FESOP) be revised to more accurately reflect the totals listed on the Summary Sheet of the Calculations sheets shown on Page 1 of Appendix A, for the Plant 24 rotary dryer and for Plant 24 Uncontrolled Units.

Response to Comment 5:

IDEM agrees that the Table referenced above should be changed to correct typographical errors on the tons per year emission levels. However, as stated in Paragraph Two of this section, the Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but this Addendum to the Technical Support Document shows the correction as follows:

Process / Emission Unit	PM	PM10	PM2.5	PM, PM10, PM2.5
	Limit (pounds per hour)	Limit (pounds per hour)	Limit (pounds per hour)	Limit (tons per year)
Plant 14 Slag Processing				
Rotary Dryer, P01-14 with wet scrubber, CE01-14	3.5	3.5	3.5	15.3
Enclosed Dry Slag Process all (controlled by Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	3.5	3.5	7.5	PM, PM10 - 15.3 PM2.5 - 32.83
(all controlled by Baghouse C02-14): Bucket elevators (8) -M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14				
Raw Slag Handling (all uncontrolled) Loading Hopper LH01-14	1.0	1.0	0.5	PM, PM10 - 15.3 PM2.5 - 5.89
Conveyor Transfer Points (3) TP01-14a thru c	0.5 each	0.5 each	0.11 each	
Initial Screening IS01-14	1.0	1.0	0.5	
Plant 24 Slag Processing				
(controlled by Baghouse CE01-24): Rotary Dryer P01-24	3.5	3.5	3.5	15.33
(all controlled by Baghouse CE01-24): Conveyors (2) -M03-24, M05-24 Chute to screen M04-24 Screens (2) -P03-24, P05-24 Bucket elevators (4) -M06-24, M07-24, M08-24, M09-24 Crusher P04-24	6.05	6.05	5.98	PM, PM10 - 26.5 PM2.5 - 26.18

<u>Uncontrolled Units</u> Feed Hopper FH01-24	0.25	0.25	0.05	PM, PM10 - 1.97 PM2.5 - 0.4357
Conveyors (2) -M01-24, M02-24	0.10 each	0.10 each	0.04 each	

Comment 6:

Appendix A: Calculations: the source has requested that the AP-42 emission factors and resulting calculations in Appendix A, Pages 2 through 7, be revised and be replaced with the most recent stack test results at the HARSCO facility, and be reflected in the calculations on Page 1 in the "Controlled/Limited" Section.

Response to Comment 6:

IDEM disagrees with this request. The emissions levels shown in the Limited Summary Table on Page 1 of the calculations in Appendix A to the Technical Support Document are limits that the source has elected to take to remain FESOP. Stack test data is a measure of emissions to verify compliance with the limits. Emission Factors used in the Potential to Emit calculations are for uncontrolled emissions. In the Limited Summary Table on Page 1, however, the numbers should still reflect the limits required in order for the source to remain FESOP, and, therefore, would not change. Stack test data available for this source are Plant 14 Rotary Dryer with wet scrubber, dated January 16, 2007; enclosed Dry Slag Processing, with baghouse, dated September 20, 2005; and Plant 24 Slag Processing with baghouse, dated October 17, 2006. After a telephone conference with the agent for the source, the source has requested on October 15, 2009 to withdraw its comment number 6. Therefore, no changes will be made to the permit.

IDEM Contact

- (a) Questions regarding this proposed renewal can be directed to Jack Harmon 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) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.
- (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
Federally Enforceable State Operating Permit Renewal

Source Background and Description

Source Name:	HARSCO Corporation - Reed Minerals Division
Source Location:	7100 West 9th Avenue, Gary, Indiana 46406
County:	Lake
SIC Code:	3295
Permit Renewal No.:	089-27389-00107
Permit Reviewer:	Jack Harmon

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from HARSCO Corporation - Reed Minerals Division relating to the operation of two stationary slag processing plants.

History

On January 21, 2009, HARSCO Corporation - Reed Minerals Division submitted an application to the OAQ requesting to renew its operating permit. HARSCO Corporation - Reed Minerals Division was issued a FESOP on August 9, 2004. With the issuance of the original FESOP, issued August 9, 2004, the source consisted of two slag processing plants, both of which were incorporated into one source with one permit; Plant 24 was originally designated as a portable slag processing plant; however, Plant 24 has never been relocated, and, according to information received from the source on May 28, 2009, there were never any plans to move it off the source plant site. Therefore, this permit designates both plants as stationary slag processing plants.

Source Description

This stationary slag processing company consists of two (2) plants:

- (a) Plant 14 is located at 7100 West 9th Street, Gary, Indiana 46406, processing boiler slag from power plants and producing roof granules and abrasive grit; and
- (b) Plant 24 is located at 7100 West 9th Street, Gary, Indiana 46406, processing blast furnace slag and producing roofing granules.

Permitted Emission Units and Pollution Control Equipment

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

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consisting of the following:
 - (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14.

Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).
 - (2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:
 - (i) Three (3) crushers, identified as P03-14;

- (ii) Eleven (11) screens, identified as P02-14;
 - (iii) Eight (8) bucket elevators, identified as M01-14;
 - (iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
 - (v) Six (6) blend silos, identified as M03-14;
 - (vi) Three (3) roofing silos, identified as M05-14;
 - (vii) Eight (8) blasting silos, identified as M04-14; and
 - (viii) One (1) chute to blasting silos, identified as M06-14;
- (3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:
- (i) One (1) loading hopper;
 - (ii) Three (3) conveyor transfer points; and
 - (iii) One (1) initial screening operation;
- (4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and
- (5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.
- (b) Plant 24 consisting of one (1) stationary slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:
- (1) One (1) feed hopper;
 - (2) Two (2) conveyors to the dryer, identified as M01-24 and M02-24;
 - (3) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant);
- (4) One (1) conveyor to chute, identified as M03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (5) One (1) chute to the screen, identified as M04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (6) One (1) conveyor to the bucket elevator, identified as M05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (7) One (1) QC screen, identified as P03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
 - (8) One (1) bucket elevator, identified as M06-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;

- (9) One bucket elevator, identified as M07-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- (10) Two (2) bucket elevators, identified as M08-24 and M09-24, controlled by baghouse CE01-24, and exhausting through stack S01-24;
- (11) One (1) crusher, identified as P04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24; and
- (12) One (1) J&H Hummer screen, identified as P05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.

Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
- (c) Cleaners and solvents characterized as having a vapor pressure less than or equal to seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F) the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month periods;
- (d) Combustion source flame safety purging on startup;
- (e) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Refractory storage not requiring air pollution control equipment;
- (h) Paved and unpaved roads and parking lots with public access;
- (i) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;
- (j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (k) Purge double block and bleed valves;
- (l) Other emission units, not regulated by a NESHAP, with PM10 and SO₂ emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
 - (1) One (1) coal slag pile, with a maximum capacity of 500,000 tons;
 - (2) One (1) fines pile, with a maximum capacity of 200,000 tons;
 - (3) Five (5) slag storage tanks, constructed in 2004;

- (4) One (1) blast furnace slag pile;
- (5) Two (2) temporary fines piles;
- (6) Two (2) wet screws;
- (7) Two (2) front end loading activities to move raw materials and fines;
- (8) One (1) load out to truck;
- (9) Six (6) storage silos;
- (10) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside;
- (11) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture; and
- (12) One (1) oversize storage pile with a maximum capacity of 20,000 tons.

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

The source has no emission units that were constructed and/or is operating without a permit:

Emission Units and Pollution Control Equipment Descriptive Changes For the Source

The source has requested the following changes to further describe the emission units at the source in its permit. These items are not new units to the source.

- (a) Emission Units and Pollution Control Summary
 - (1) Plant 14
 - (i) One (1) chute to blasting silos, identified as M06-14;
 - (ii) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors;
 - (iii) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.
- (b) Insignificant Activities
 - (1) The fuel oil-fired combustion sources with maximum heat input of less than or equal to two million (2,000,000) Btu per hour changed to natural gas-fired combustion sources with heat input less than or equal to ten million (10,000,000) Btu per hour.
 - (2) One (1) coal slag piles, with a maximum capacity of 150,000 tons changed to 500,000 tons.
 - (3) One (1) unsaleable pile, with a maximum capacity of 10,000 tons changed to one (1) fines pile, with a maximum capacity of 200,000 tons; the single reference to fines storage pile to be deleted;
 - (4) One (1) oversize storage pile, with a maximum capacity of 20,000 tons.

Emission Units and Pollution Control Equipment Added At the Source

- (a) Insignificant Activities
 - (1) Cleaners and solvents characterized as having a vapor pressure less than or equal to seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty degrees Centigrade (20°C) (sixty-eight degrees Fahrenheit (68°F) the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month periods.

Emission Units and Pollution Control Equipment Removed From the Source

The source has provided information in its renewal application that it has removed the following items from its facility:

- (a) Emission Units and Pollution Control Summary
 - (1) Plant 14
 - (i) Two (2) of thirteen (13) screens, identified as P02-14;
 - (ii) Two (2) of eleven (11) conveyors, identified as M02-14.
 - (2) Plant 24
 - (i) One (1) screen, identified as P02-24.

On August 6, 2009, the source requested the following additional change to its emission units at its facility:

- (a) Emission Units and Pollution Control Summary
 - (1) Plant 34
 - (i) Removal Plant 34 from its permit in its entirety. Plant 34 was permitted in the Significant Permit Revision No. 089-25064-00107, issued March 17, 2008, but was never constructed, nor are there any plans to construct. Therefore, Plant 34 has been removed from the renewal permit.

Existing Approvals

Since the issuance of the FESOP (089-16215-00107) on August 9, 2004, the source has constructed or has been operating under the following approvals as well:

- (a) Administrative Amendment No. 089-20294-00107, issued on December 23, 2004;
- (b) Administrative Amendment No. 089-21212-00107, issued on July 1, 2005;
- (c) Significant Permit Revision No. 089-22517-00107, issued on April 20, 2006;
- (d) Administrative Amendment No. 089-24577-00107, issued on July 11, 2007; and
- (e) Significant Permit Revision No. 089-25064-00107, issued on March 17, 2008.

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

The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

- (a) Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the permit. References to "Permit Administration and Development Section" and the "Permits Branch" have been changed to "Permit Administration and Support Section". References to "Asbestos Section", "Compliance Data Section", "Air Compliance Section", and "Compliance Branch" have been changed to "Compliance and Enforcement Branch". The permit has been revised as follows:

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

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

- (b) The source has requested to remove Condition B15 of the permit and has submitted a proposed revision to language in Condition C18 of the permit. IDEM OAQ has reviewed the request and has changed the permit as requested. Subsequent Conditions in Section B and Section C have been renumbered as the result of these changes.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this FESOP Renewal:

- (a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

- (b) Removal of Local Agency Designation

Reason not incorporated: Local agencies no longer have effective authority to implement state and federal requirements for IDEM. Therefore, IDEM has removed all references to local agencies from the permit. The revised permit specifies that all reports, notices, applications, and any other required submittals shall be submitted to IDEM. The Permittee should note that the local agency could have its own requirements beyond the state and federal requirements contained in the permit. Please contact the local agency for further information.

Enforcement Issue

IDEM is aware that the application submitted for this renewal was not submitted in a timely manner as required in the terms and conditions contained in Condition B.17(b)(1) of the existing permit. IDEM is reviewing this matter and will take appropriate action.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Lake County

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148 th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O ₃	Nonattainment Subpart 2 Moderate effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

(i) 1-hour ozone standard

On December 22, 2006 the United States Court of Appeals, District of Columbia issued a decision which served to partially vacate and remand the U.S. EPA's final rule for implementation of the eight-hour National Ambient Air quality Standard for ozone. *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir., December 22, 2006), *rehearing denied* 2007 U.S. App. LEXIS 13748 (D.C. Cir., June 8, 2007). The U.S. EPA has instructed IDEM to issue permits in accordance with its interpretation of the *South Coast* decision as follows: Gary-Lake-Porter County was previously designated as a severe non-attainment area prior to revocation of the one-hour ozone standard, therefore, pursuant to the anti-backsliding provisions of the Clean Air Act, any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. This means that a source must achieve the Lowest Achievable Emission Rate (LAER) if it exceeds 25 tons per year of VOC emissions and must offset any increase in VOC emissions by a decrease of 1.3 times that amount.

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.

(ii) 8-hour ozone standard

VOC and NOx emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

(b) PM2.5

U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on May 8th, 2008, and effective on July 15th 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

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

(d) Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10 and PM2.5 is equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM10 and PM2.5 emissions to less than Title V levels, therefore the source will be issued a FESOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.
- (d) This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	11.0
PM ₁₀	11.0
SO ₂	0.0
VOC	0.0
CO	2.0
NO _x	2.0
HAP (specify)	not reported

Potential to Emit After Issuance

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

Process/Emission Unit	Potential to Emit (tons/yr)							
	PM	PM-10	PM-2.5	SO ₂	NOx	VOC	CO	HAPs
Plant 14 Rotary Dryer, P01-14	15.30	15.30	15.30	0.07	11.83	0.65	9.93	0.227 (Hexane)
Plant 14 Enclosed Dry Slag Processing	15.30	15.30	32.83	0.00	0.00	0.00	0.00	0.00
Plant 14 Raw Slag Handling	15.30	15.30	5.89	0.00	0.00	0.00	0.00	0.0
Plant 24 Dryer	15.30	15.30	15.30	0.03	5.30	0.29	4.42	0.01
Plant 24 Slag Processing	26.50	26.50	26.18	0.03	5.30	0.29	4.42	0.10
Plant 24 Uncontrolled Units	1.97	1.97	0.57	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions Unpaved Roads	7.81	7.81	0.63	0.0	0.0	0.0	0.0	0.0
Fugitive Emissions Storage Piles	1.01	1.01	0.07	0.0	0.0	0.0	0.0	0.0
Cleaners and Solvents	0	0	0	0	0	0	0	0.00308 (Xylene)
Total Emissions	98.55	98.55	96.83	0.10	17.13	0.94	14.35	0.327
PSD Threshold	250	250	NA	250	250	NA	NA	NA
Emission Offset Threshold	NA	NA	100	NA	NA	25	100	NA
Title V Thresholds	NA	100	100	100	100	25	100	10 for a single HAP and 25 for total HAPs

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (250) tons per year, and it is not one of the twenty-eight (28) source categories.
- (b) This existing stationary source is not major for Emission Offset and Nonattainment NSR because the emissions of the nonattainment pollutant, PM_{2.5}, are less than one hundred (<100) tons per year.
- (c) This existing stationary source is not major for Emission Offset and Nonattainment NSR because the emissions of the nonattainment pollutants, VOC and NO_x, are less than twenty-five (<25) tons per year and one hundred (<100) tons per year, respectively.
- (d) Fugitive Emissions
 This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) This source processes coal slag and more than 50% of the slag becomes roofing granules. According to the definition in 40 CFR 60.731, this source is considered a mineral processing plant, as determined in the original FESOP permit number 089-16214-00107, issued August 9, 2004. Since the dryers at this source were constructed after April 23, 1986, they are subject to the requirements of the New Source Performance Standards for Calciners and Dryers in Mineral Industries (326 IAC 12, 40 CFR 60.730-737, Subpart UUU) and have the following requirements:
- (1) Pursuant to 40 CFR 60.732(a), the PM emissions from the dryers (P01-14 and P01-24) at this source shall each not exceed 0.025 gr/dscf. Since dryer P01-14 is controlled by a wet scrubber CE01-14, it is not subject to the opacity limit in 40 CFR 60.732(b). Pursuant to 40 CFR 60.732(b), the opacity of the exhaust from dryer P01-24 which is each controlled by a baghouse, shall not exceed 10%.
 - (2) For the dryer P01-24, controlled by baghouse CE01-24, the Permittee has elected to comply with the once per day monitoring requirements in 40 CFR 60.734(b), instead of installing a continuous opacity monitoring system as required in 40 CFR 60.734(a). Pursuant to 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.
 - (3) Pursuant to 40 CFR 60.732(b)(1), the natural gas-fired rotary dryers used in the production of roofing granules shall be subject to PM and PM10 performance testing, as outlined in Method 5.
- (b) This source only processes coal slag at this plant; therefore, the New Source Performance Standards for Coal Preparation Plants (40 CFR 60.250-254, Subpart Y) are not applicable to this source.
- (c) The requirements of the New Source Performance Standards, 40 CFR Part 60, Subpart OOO, are not applicable to slag processing operations. The original ore is expanded and vitrified in a furnace which alters the physical and chemical makeup of the ore producing a slag by-product that does not meet the definition of a nonmetallic mineral in 40 CFR Subpart 60.671.
- (d) There are no additional New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this revision.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 63, and 40 CFR 61) included in this revision.

State Rule Applicability - Entire Source

State Rule Particulate Matter Applicability

<u>Process / Emission Unit</u>	<u>326 IAC 2-2</u>	<u>326 IAC 2-8</u>	<u>326 IAC 6.8-1-2</u>	<u>326 IAC 6.8-2-29</u>
	<u>Pollutant and Limit</u>	<u>Pollutant and Limit</u>	<u>Pollutant and Limit</u>	<u>Pollutant and Limit</u>
Plant 14 Slag Processing				
Rotary Dryer, P01-14 with wet scrubber, CE01-14	PM – 3.5 lb/hr	PM10 - 3.5 lb/hr	Not applicable	PM10- 3.5 lb/hr
		PM2.5 - 3.5 lb/hr		PM10- 0.015 gr/dscf
<u>Enclosed Dry Slag Process</u> all (controlled by Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	PM- 3.5 lb/hr	PM10 - 3.5 lb/hr PM2.5 - 7.5 lb/hr	Not applicable	PM10- 9.0 lb/hr* PM10- 0.015 gr/dscf
(all controlled by Baghouse C02-14): Bucket elevators (8) -M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14				PM- 0.03 gr/dscf
<u>Raw Slag Handling</u> (all uncontrolled) Loading Hopper LH01-14	PM - 1.0 lb/hr	PM10 - 1.0 lb/hr PM2.5 - 0.50 lb/hr	PM- 0.03 gr/dscf	Not applicable
Conveyor Transfer Points (3) TP01-14a thru c	PM - 0.5 lb/hr each	PM10 - 0.5 lb/hr each PM2.5 - 0.11 lb/hr each		
Initial Screening IS01-14	PM - 1.0 lb/hr	PM10 - 1.0 lb/hr PM2.5 - 0.50 lb/hr		
* Source took more stringent limit of 3.5 lb/hr				
Plant 24 Slag Processing				
(controlled by Baghouse CE01-24): <u>Rotary Dryer P01-24</u>	PM - 3.5 lb/hr	PM10-3.5 lb/hr PM2.5 - 3.5 lb/hr	PM- 0.03 gr/dscf	Not applicable
(all controlled by Baghouse CE01-24): Conveyors (2) -M03-24, M05-24 Chute to screen M04-24 Screens (2) -P03-24, P05-24 Bucket elevators (4) -M06-24, M07-24, M08-24, M09-24 Crusher P04-24	PM- 6.05 lb/hr	PM10 - 6.05 lb/hr PM2.5- 5.98 lb/hr		
<u>Uncontrolled Units</u> Feed Hopper FH01-24	PM - 0.25 lb/hr	PM10 - 0.25 lb/hr PM2.5 - 0.05 lb/hr	PM- 0.03 gr/dscf	Not applicable
Conveyors (2) -M01-24, M02-24	PM - 0.10 lb/hr each	PM10 - 0.10 lb hr each PM2.5 - 0.04 lb/hr each		

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

This source is not subject to the requirements of this rule. The source is not one of the twenty-eight (28) listed source categories, but it does have an unlimited potential to emit greater than two hundred fifty (250) tons per year of PM and PM₁₀. However, this source will remain a minor source pursuant to 326 IAC 2-2 (PSD) because, as shown in the "Potential to Emit After Issuance" table above, the allowable emissions of PM will remain less than 250 tons per year, and the allowable emissions of PM10 will remain less than 100 tons per year after application of all federally enforceable emission limits.

326 IAC 2-3 (Emission Offset)

(a) This existing source is located in Lake County, which is designated as nonattainment for

Ozone under the 1-hour and 8-hour standard. The potential to emit of VOC from this source is less than 25 tons per year. This renewal does not result in an appreciable increase in potential VOC; therefore, the provisions of 326 IAC 2-3 (Emission Offset) do not apply.

- (b) Lake County has been designated as nonattainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM 2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM 2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM, OAQ will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit 100 tons per year of any regulated pollutant. HARSCO - Reed Minerals Division has limited its potential PM10 emissions below 100 tons per year pursuant to the provisions of 326 IAC 2-8, FESOP No.: 089-16215-00107 issued August 9, 2004. Compliance with these provisions also ensures minor source status under 326 IAC 2-3, Emission Offset.

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

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

326 IAC 2-6 (Emission Reporting)

This source is located in Lake County and did not emit more than 25 tons/yr of NO_x or SO₂ in 2002. In addition, a Part 70 permit is not required for this source because they elected to comply with FESOP limits to limit the PTE of the entire source to less than the Part 70 major source thresholds. Therefore, this source is not subject to 326 IAC 2-6 (Emission Reporting).

326 IAC 2-8 (FESOP)

Pursuant to FESOP No.: 089-16215-00107 issued August 9, 2004, and 326 IAC 2-2 (PSD), the Permittee shall continue to limit their PM, PM10, and PM2.5 emissions as follows:

<u>Process / Emission Unit</u>	<u>PM</u>	<u>PM10</u>	<u>PM2.5</u>	<u>PM, PM10, PM2.5</u>
	<u>Limit (pounds per hour)</u>	<u>Limit (pounds per hour)</u>	<u>Limit (pounds per hour)</u>	<u>Limit (tons per year)</u>
Plant 14 Slag Processing				
Rotary Dryer, P01-14 with wet scrubber, CE01-14	3.5	3.5	3.5	15.3
Enclosed Dry Slag Process all (controlled by Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	3.5	3.5	7.5	PM, PM10 - 15.3 PM2.5 - 32.83
(all controlled by Baghouse C02-14): Bucket elevators (8) - M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14				
Raw Slag Handling (all uncontrolled) Loading Hopper LH01-14	1.0	1.0	0.5	PM, PM10 - 15.3 PM2.5 - 5.89
Conveyor Transfer Points (3) TP01-14a thru c	0.5 each	0.5 each	0.11 each	
Initial Screening IS01-14	1.0	1.0	0.5	

Plant 24 Slag Processing				
(controlled by Baghouse CE01-24): Rotary Dryer P01-24	3.5	3.5	3.5	15.3
(all controlled by Baghouse CE01-24): Conveyors (2) -M03-24, M05-24 Chute to screen M04-24 Screens (2) -P03-24, P05-24 Bucket elevators (4) -M06-24, M07-24, M08-24, M09-24 Crusher P04-24	6.05	6.05	5.98	PM, PM10 - 26.5 PM2.5 - 26.18
Uncontrolled Units Feed Hopper FH01-24	0.25	0.25	0.05	PM, PM10 - 1.97 PM2.5 - 0.13
Conveyors (2) -M01-24, M02-24	0.10 each	0.10 each	0.04 each	

Combined with the PM, PM10, and PM2.5 emissions from Plant 14, Plant 24, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10 and PM2.5. Therefore, this source is a minor source under 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures)

This source is located in Lake County and is listed under 326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements), therefore, the requirements of 326 IAC 6.8-11 are applicable to this source. Pursuant to 326 IAC 6.8-11, upon notification from IDEM, OAQ, that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

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

Dryer P01-24 is subject to the requirements contained in 326 IAC 6.8-1-2 (Nonattainment Area Particulate Limitations). Therefore, this dryer is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This existing source is located in Lake County. Pursuant to 326 IAC 6-5-1(a), this source is not subject to the requirements of 326 IAC 6-5. Therefore, the requirements of 326 IAC 6-5 are not applicable.

326 IAC 6.8-1-2 (Particulate Matter Emission Limitation for Lake County)

This source is located in Lake County, and, pursuant to 326 IAC 6.8-1-1.5(5), meets the description of a grain elevator, and is, therefore, subject to 326 IAC 6.8-1-2. Pursuant to FESOP No.: 089-

16215-00107 issued August 9, 2004, 326 IAC 2-2 (PSD), and 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), the Permittee shall continue to limit their PM and PM10 emissions as follows:

<u>Process / Emission Unit</u>	<u>PM Limit</u> (grains per dry standard cubic foot)
Plant 14 Slag Processing Rotary Dryer, P01-14 with wet scrubber, CE01-14	*
<u>Enclosed Dry Slag Process</u> (all controlled by Baghouse C02-14): Crushers P03-14a thru c Screens P02-14a thru k	*
(all controlled by Baghouse C02-14): Bucket elevators (8) - M01-14a thru h Conveyors (9) - M02-14a thru i Blend Silos (6) - M03-14a thru f Roofing Silos (3) - M05-14a thru c Blasting Silos (8) - M04-14a thru h Chute to Blasting Silo - M06-14	0.03
<u>Raw Slag Handling</u> Loading Hopper LH01-14 Conveyor Transfer Points (3) - TP01-14a thru c Initial Screening IS01-14	0.03
* - Not limited under 326 IAC 6.8-1-2 because already limited under 326 IAC 6.8-2-29	
Plant 24 Slag Processing (all controlled by Baghouse CE01-24) Rotary Dryer P01-24 Conveyors (2) - M03-24, M05-24 Chute to screen M04-24 Screens (2) - P03-24, P05-24 Bucket elevators (4) - M06-24, M07-24, M08-24, M09-24 Crusher P04-24	0.03
<u>Uncontrolled Units</u> Feed Hopper FH01-24 Conveyors (2) - M01-24, M02-24	0.03

Combined with the PM, PM10, and PM2.5 emissions from Plant 14, Plant 24, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10 and PM2.5. Therefore, this source is a minor source under 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations)

This source is located in Lake County and is one of the sources listed under 326 IAC 6.8-2-1. Therefore, this source is subject to the requirements in 326 IAC 6.8-10-3. Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).

- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan.

326 IAC 6.8-2-29 (Lake County PM10 Emission Requirements)

This source is located in Lake County and the Plant 14 Rotary Dryer P01-14 and the Plant 14 Crushers P03-14 and Screens P02-14 are specifically listed as affected facilities in 326 IAC 6.8-2-29; therefore this equipment at this source is subject to the requirements of 326 IAC 6.8-2-29. Pursuant to 326 IAC 6.8-2-29 (Lake County PM10 Emission Requirements), the Permittee shall continue to limit their PM10 emissions as follows:

<u>Process / Emission Unit</u>	<u>PM10 Limit</u>
Plant 14 Slag Processing	
Rotary Dryer, P01-14, with wet scrubber, CE01-14	3.5 pounds per hour 0.015 grains per dry standard cubic foot
Enclosed Dry Slag Process (with Baghouse C02-14) Crushers P03-14a thru c Screens P02-14a thru k	3.5 pounds per hour 0.015 grains per dry standard cubic foot

326 IAC 7-4-1 (Lake County SO₂ Emission Limitations)

The potential to emit SO₂ from dryer P01-14 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 7-4-1 are not applicable.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration.

When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

These monitoring conditions are necessary because uncontrolled slag handling operations must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations).

In order to demonstrate compliance with the PM limit, the Permittee shall perform PM testing of the dryer/mixer utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

In order to demonstrate compliance with the PM2.5 and PM10 limits, the Permittee shall perform PM2.5 and PM10 testing on the dryer/mixer within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, or five (5) years from the most recent valid compliance stack test, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM10 and PM2.5 includes filterable and condensable PM.

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

Control	Parameter	Frequency	Range	Excursions and Exceedances
Plant 14 Baghouse CE01-14	Water Pressure Drop	Once per day when operating	6.0 - 10.0 inches of water	Response Steps
	Visible Emissions		Normal-Abnormal	
Plant 24 Baghouse CE01-24	Water Pressure Drop	Once per day when operating	3.0 - 5.5 inches of water	Response Steps
	Visible Emissions		Normal-Abnormal	

Recommendation

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

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

An application for the purposes of this review was received on January 21, 2009. Additional information was received on May 28, 2009.

Conclusion

The operation of this stationary slag processing source shall be subject to the conditions of the attached FESOP Renewal No. 089-27389-00107.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jack Harmon 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) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emissions Calculations
Entire Source Emission Unit Summary
Using Stack Test Data for Emission Factors**

Company Name: Harsco Corp. - Reed Minerals Division
Address City IN Zip: 7100 West 9th Avenue,
Gary, Indiana 46406
Permit No.: 089-27389-00107
Reviewer: Jack Harmon
Date: June 5, 2009

Uncontrolled Potential Emissions (tons/year)											
Category	Pollutant	Emissions Generating Activity									
		Plant 14					Plant 24				TOTAL
		Dryer Nat Gas Dryer	Enclosed Dry Slag Processing	Raw Slag Handling	Unpaved Roads Fugitive Emissions	Storage Piles Fugitive Emissions	Dryer Nat Gas Dryer	Slag Processing	Uncontrolled Units		
Criteria Pollutants	PM	180.00	442.70	13.24	33.98	1.01	80.00	25.72	1.63	778.28	
	PM10	180.00	509.64	5.89	6.33	0.48	80.00	86.42	0.57	869.33	
	PM2.5	180.00	509.64	5.89	0.63	0.07	80.00	86.42	0.57	863.22	
	SO2	0.07	0	0	0	0	0.03	0	0	0.10	
	NOx	11.83	0	0	0	0	5.30	0	0	17.13	
	VOC	0.65	0	0	0	0	0.29	0	0	0.94	
	CO	9.93	0	0	0	0	4.42	0	0	14.35	
Hazardous Air Pollutants	Benzene	2.84E-04	0	0	0	0	1.10E-04	0	0	3.94E-04	
	Dichlorobenzene	1.42E-04	0	0	0	0	6.30E-05	0	0	2.05E-04	
	Formaldehyde	8.87E-03	0	0	0	0	3.94E-03	0	0	0.01	
	Hexane	2.13E-01	0	0	0	0	9.46E-02	0	0	0.31	
	Toluene	4.02E-04	0	0	0	0	1.79E-04	0	0	0.00	
	Cadmium	1.30E-04	0	0	0	0	5.80E-05	0	0	1.88E-04	
	Chromium	1.66E-04	0	0	0	0	7.40E-05	0	0	2.40E-04	
	Zinc	3.43E-03	0	0	0	0	1.52E-03	0	0	4.95E-03	
	Manganese	4.49E-05	0	0	0	0	2.00E-05	0	0	6.49E-05	
	Nickel	2.48E-04	0	0	0	0	1.10E-04	0	0	3.58E-04	
	Xylene									0.00E+00	
	1,3-Butadiene										
	Acetaldehyde										
	Acrolein										
	Total HAPs		2.27E-01	0	0	0	0	1.01E-01	0	0	0.33
Total emissions based on rated capacity at 8,760 hours/year.										0.3 (Hexane)	
Controlled/Limited Potential Emissions (tons/year)											
Category	Pollutant	Emission Units									
		Plant 14					Plant 24				TOTAL
		Dryer NG Combustion	Enclosed Dry Slag Processing	Raw Slag Handling	Unpaved Roads Fugitive Emissions	Slag Storage Piles Fugitive Emissions	Dryer NG Combustion	Slag Handling Operations	Uncontrolled Units		
Criteria Pollutants	PM	15.30	15.30	15.30	7.81	1.01	15.33	26.500	1.970	98.55	
	PM10	15.30	15.300	15.300	7.81	1.01	15.33	26.500	1.970	98.55	
	PM2.5	15.30	32.830	5.890	0.63	0.07	15.33	26.180	0.570	96.83	
	SO2	0.07	0	0	0	0	0.03	0	0	0.10	
	NOx	11.83	0	0	0	0	5.30	0	0	17.13	
	VOC	0.65	0	0	0	0	0.29	0	0	0.94	
	CO	9.93	0	0	0	0	4.42	0	0	14.35	
Hazardous Air Pollutants	Benzene	2.84E-04	0	0	0	0	1.10E-04	0	0	3.94E-04	
	Dichlorobenzene	1.42E-04	0	0	0	0	6.30E-05	0	0	2.05E-04	
	Formaldehyde	8.87E-03	0	0	0	0	3.94E-03	0	0	1.28E-02	
	n-Hexane	2.13E-01	0	0	0	0	9.46E-02	0	0	3.08E-01	
	Toluene	4.02E-04	0	0	0	0	1.79E-04	0	0	5.81E-04	
	Cadmium	1.30E-04	0	0	0	0	5.80E-05	0	0	1.88E-04	
	Chromium	1.66E-04	0	0	0	0	7.40E-05	0	0	2.40E-04	
	Zinc	3.43E-03	0	0	0	0	1.52E-03	0	0	4.95E-03	
	Manganese	4.49E-05	0	0	0	0	2.00E-05	0	0	6.49E-05	
	Nickel	2.48E-04	0	0	0	0	1.10E-04	0	0	3.58E-04	
	Xylene									0.00E+00	
	1,3-Butadiene										
	Acetaldehyde									0.00E+00	
	Acrolein										
	Total HAPs		2.27E-01	0	0	0	0	1.01E-01	0	0	3.27E-01
Total emissions based on rated capacity at 8,760 hours/year.										3.08E-01 (Hexane)	

* The emissions contained in this table are based on the control efficiency of the control device(s) used by the Source.

**Appendix A: Particulate & VOC Emission Calculations
Natural Gas-Fired Rotary Dryer
Plant 14**

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 West 9th Avenue, Gary, Indiana 46406
FESOP No. 089-27389-00107

Reviewer: Jack Harmon
Date: June 5, 2009

Heat Input Capacity
(MMBtu/hour)

Potential Throughput
(MMSCF/year)

Wet Scrubber
Control Efficiency
99.5% (for PM/PM10 only)

27.0

236.5

Pollutant

Emission Factor	PM* 7.6 (lbs/MMCF)	PM10* 7.6 (lbs/MMCF)	PM2.5 7.6 (lbs/MMCF)	**SO ₂ 0.6 (lbs/MMCF)	**NO _x 100 (lbs/MMCF)	**VOC 5.5 (lbs/MMCF)	**CO 84.0 (lbs/MMCF)
PTE (tons/year) Before Control	180	180	180	0.07	11.8	0.65	9.93
PTE (tons/year) After Control	0.90	0.90	0.90	0.07	11.8	0.65	9.93

* PM/PM10/PM2.5 emission rates are from AP-42, Chapter 1.4, Tables 1.4-1,-2,-3, (7/98).

**Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (7/98).

NOTE: The NG combustion calculations are from the original FESOP issued to the source.

METHODOLOGY

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

PTE of SO₂, NO_x, VOC and CO (tons/yr) = Potential Throughput (MMSCF/year) * Emission Factor (lb/MMSCF) x 1 ton/2000 lbs

PTE of PM/PM10 Before Control (tons/year) = Emission Rate (lbs/hour) * 8760 hours/year x 1 ton/2000 lbs

PTE of PM/PM10 After Control (tons/year) = Emission Rate (lbs/hour) * 8760 hours/year * 1 ton/2000 lbs * 1/ (1 - Control Efficiency %)

**Appendix A: HAPs Emission Calculations
Natural Gas-Fired Rotary Dryer
Plant 14**

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-27389-00107
Reviewer: Jack Harmon
Date: June 5, 2009

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	0.000248	0.000142	0.008870	0.212868	0.000402

Emission Factor in lb/MMcf	HAPs - Metals				
	Zinc 2.9E-02	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	0.003430	0.000130	0.000166	0.000045	0.000248

Methodology is the same as page 2.

Total HAPs = 0.227 tpy

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

Appendix A: Particulate & VOC Emission Calculations
Natural Gas-Fired Rotary Dryer
Plant 24

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 West 9th Avenue, Gary, Indiana 46406
FESOP No. 089-27389-00107

Reviewer: Jack Harmon
Date: June 5, 2009

Heat Input Capacity
(MMBtu/hour)

12.0

Potential Throughput
(MMSCF/year)

105.1

Wet Scrubber
Control Efficiency

99.5% (for PM/PM10 only)

Emission Factor	Pollutant						
	PM* 7.6 (lbs/MMCF)	PM10* 7.6 (lbs/MMCF)	PM2.5 7.6 (lbs/MMCF)	**SO ₂ 0.6 (lbs/MMCF)	**NO _x 100 (lbs/MMCF)	**VOC 5.5 (lbs/MMCF)	**CO 84.0 (lbs/MMCF)
PTE (tons/year) Before Control	80	80	80	0.03	5.3	0.29	4.42
PTE (tons/year) After Control	0.40	0.40	0.40	0.03	5.3	0.29	4.42

* PM/PM10/PM2.5 emission rates are from AP-42, Chapter 1.4, Tables 1.4-1,-2,-3, (7/98).

**Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (7/98).

NOTE: The NG combustion calculations are from the original FESOP issued to the source.

METHODOLOGY

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

PTE of SO₂, NO_x, VOC and CO (tons/yr) = Potential Throughput (MMSCF/year) * Emission Factor (lb/MMSCF) x 1 ton/2000 lbs

PTE of PM/PM10 Before Control (tons/year) = Emission Rate (lbs/hour) * 8760 hours/year x 1 ton/2000 lbs

PTE of PM/PM10 After Control (tons/year) = Emission Rate (lbs/hour) * 8760 hours/year * 1 ton/2000 lbs * 1/(1 - Control Efficiency %)

Appendix A: HAPs Emission Calculations
Natural Gas-Fired Rotary Dryer
Plant 24

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave., Gary, IN 46406

FESOP #: 089-27389-00107

Reviewer: Jack Harmon

Date: June 5, 2009

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	0.000110	0.000063	0.003942	0.094608	0.000179

Emission Factor in lb/MMcf	HAPs - Metals				
	Zinc 2.9E-02	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	0.001524	0.000058	0.000074	0.000020	0.000110

Methodology is the same as page 3.

Total HAPs = 0.101 tpy

**Appendix A: Emission Calculations
PM and PM10 Emissions
From the Slag Handling Operations**

Company Name: Harsco Corp. - Reed Minerals Division
Address City IN Zip: 7100 West 9th Avenue, Gary, Indiana 46406
Permit No.: 089-27389-00107

Reviewer: Jack Harmon
Date: June 5, 2009

Plant 14

Process	Max. Throughput (t/hr)	Number of Units	PM10, PM2.5 Emission Factor (lbs/ton)	PTE of PM10, PM2.5 before Control (lbs/hr/unit)	PTE of PM10, PM2.5 before Control (tons/yr)	PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Control Efficiency	PTE of PM10, PM2.5 after Control (tons/yr)	PTE of PM after Control (tons/yr)
Enclosed Dry Slag Processing				*(1)			*(1)				
Crushers (P03-14)	65	3	0.0024	2.17	28.51	0.0054	1.85	24.31	99.5%	1.43E-01	1.22E-01
Conveyor and Chute Transfer	65	13	0.0011	2.17	123.56	0.0030	1.85	105.34	99.5%	6.18E-01	5.27E-01
Screening	65	11	0.0087	2.17	104.55	0.0250	1.85	89.13	99.5%	0.52	0.45
Bucket Elevators	65	8	0.0011	2.17	76.04	0.0030	1.85	64.82	99.5%	3.80E-01	3.24E-01
Silos	65	18	0.0011	2.17	171.08	0.0030	1.85	145.85	99.5%	8.55E-01	7.29E-01
Subtotal					503.74			429.46		2.52E+00	2.15E+00
Raw Slag Handling											
Loading Hopper LH01-14	65	1	0.0087	0.57	2.48	0.0125	0.81	3.56	0%	2.48E+00	3.56E+00
Conveyor Transfer Points	65	3	0.0011	0.07	0.94	0.0030	0.20	2.56	0%	9.40E-01	2.56E+00
Screening	65	1	0.0087	0.57	2.48	0.0250	1.63	7.12	0%	2.48E+00	7.12E+00
Subtotal					5.89			13.24		5.89E+00	1.32E+01
TOTAL Plant 14					509.64			442.70		8.41E+00	1.54E+01

Plant 24

Process	Max. Throughput (t/hr)	Number of Units	PM10, PM2.5 Emission Factor (lbs/ton)	PTE of PM10, PM2.5 before Control (lbs/hr/unit)	PTE of PM10, PM2.5 before Control (tons/yr)	PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Control Efficiency	PTE of PM10, PM2.5 after Control (tons/yr)	PTE of PM after Control (tons/yr)
Slag Processing				*(2)			*(2)				
Crusher (P04-24)	12	1	0.0024	1.96	8.58	0.0054	0.55	2.41	99.5%	4.29E-02	1.20E-02
Conveyor and Chute Transfer	12	3	0.0011	1.96	25.75	0.00	0.55	7.23	99.5%	1.29E-01	3.61E-02
Screening	12	2	0.0087	1.96	17.17	0.03	0.55	4.82	99.5%	0.09	0.02
Bucket Elevator	12	4	0.0011	1.96	34.34	0.00	0.55	9.64	99.5%	1.72E-01	4.82E-02
Subtotal				0.00	85.85		0.00	24.09		4.29E-01	1.20E-01
Uncontrolled Units											
Feed Hopper FH01-24	12	1	0.0087	0.10	0.46	0.0250	0.30	1.31	0%	4.57E-01	1.31E+00
Conveyor Transfer Point	12	2	0.0011	0.01	0.12	0.0030	0.04	0.32	0%	1.16E-01	3.15E-01
Subtotal					0.57			1.63		5.73E-01	1.63E+00
TOTAL Plant 24					86.42			25.72		1.00E+00	1.75E+00

*(1) PM, PM10, and PM2.5 emission factors are from Stack Test Results January 16, 2007 for Plant 14 Crusher and system

*(2) PM, PM10, and PM2.5 emission factors are from Stack Test Results October 17, 2006 for Plant 24 Slag Processing

3. No Emission Factors for PM2.5 for these operations; therefore, PM 2.5 is presumed to be the same as PM10.

Methodology

PTE before Control (lbs/hr/unit) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton)

PTE before Control (tons/yr) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

* PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.

**Appendix A: Emission Calculations
Fugitive Emissions
From the Unpaved Roads - Entire Source**

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave., Gary, IN 46406
Permit #: 089-27389-00107
Reviewer: Jack Harmon
Date: June 5, 2009

1. Emission Factors:

According to AP42, Chapter 13.2.2-2 - Unpaved Roads (AP-42, 11/06), the PM/PM10/PM2.5 emission factors from the unpaved roads can be estimated from the following equation:

$$E = \frac{k \times (s/12)^a \times (w/3)^b \times (365-P)}{365}$$

where:

E = emission factor (lb/vehicle mile traveled)
s = surface material silt content (%) = 1 % (provided by the source)
w = mean vehicle weight (tons) = 38.5 tons (see the table below)
k = empirical constants = 4.9 for PM, 1.5 for PM10, and 0.15 for PM2.5
a = empirical constants = 0.7 for PM and 0.9 for PM10 and PM2.5
b = empirical constants = 0.45 for PM, PM10, and PM2.5
P = number of precipitation days = 120 days/yr

PM Emission Factor = $\frac{4.9 \times (1/12)^{0.7} \times (38.5/3)^{0.45} \times (365-120)}{365}$ = 1.82 lbs/mile

PM10 Emission Factor = $\frac{1.5 \times (1/12)^{0.9} \times (38.5/3)^{0.45} \times (365-120)}{365}$ = 0.34 lbs/mile

PM2.5 Emission Factor = $\frac{.15 \times (1/12)^{0.9} \times (38.5/3)^{0.45} \times (365-120)}{365}$ = 0.03 lbs/mile

2. Potential to Emit (PTE) of PM/PM10 Before Control from Unpaved Roads:

Vehicle Type	*Ave Weight of Vehicles (tons)	*Trip Number (trips/hr)	* One-Way Distance (mile/trip)	Vehicle Mile Traveled (VMT) (miles/yr)	Traffic Component (%)	Component Vehicle Weight (tons)	PTE of PM before Control (tons/yr)	PTE of PM10 before Control (tons/yr)	PTE of PM2.5 before Control (tons/yr)
Freight Carriers	40.0	1.6	0.40	11,213	30.0%	12.0	10.2	1.90	0.19
Dump Trucks	40.0	3.1	0.40	21,725	58.2%	23.3	19.8	3.68	0.37
Dump Trucks	27.5	1.0	0.25	4,380	11.7%	3.23	3.99	0.74	0.07
Total				37,318	100%	38.5	34.0	6.33	0.63

* This information is provided by the source.

Methodology

Vehicle Mile Traveled (miles/yr) = Trip Number (trips/hr) x One-Way Distance (mile/trip) x 2 x 8760 hrs/yr

Traffic Component (%) = VMT / Total VMT

Component Vehicle Weight = Ave. Weight of Vehicles (ton) x Traffic Component (%)

PTE of PM/PM10 before Control (tons/yr) = VMT (miles/yr) x PM/PM10 Emission Factors x 1 ton/2000 lbs

3. Potential to Emit PM/PM10 after Control:

The source also proposed to use wet suppression (oil or water) to control fugitive dust emissions. The control efficiency from wet suppression is 90% when the moisture content is greater than 5%.

PTE of PM after Control (tons/yr) = 34.0 tons/yr x (1-90%) = **3.40 tons/yr**
 PTE of PM10 after Control (tons/yr) = 6.33 tons/yr x (1-90%) = **0.63 tons/yr**
 PTE of PM2.5 after Control (tons/yr) = 0.63 tons/yr x (1-90%) = **0.06 tons/yr**

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: HARSCO Corporation - Reed Minerals Division
Address City IN Zip: 7100 West 9th Avenue, Gary, Indiana 46406
Permit Number: 089-27389-00107
Plt ID: 089-00107
Permit Reviewer: Jack Harmon
Date: July 6, 2009

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Xylene Emissions (ton/yr)
C9 Naphthenes	6.62	1.000000	0.0166	1.00%	0.0048

Total Potential Emissions 0.0048 tons per year

METHODOLOGY

Per 40 CFR 63, Table 1, Naphthene, CAS No. 8052-41-3 (Stoddard Solvent) contains 1% xylene

Maximum per hour is based on maximum usage of 145 gallons per year divided by 8760 hours.

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Dion Mulcahy
HARSCO - Reed Minerals
7100 W 9th Avenue
Gary, IN 46406

DATE: October 19, 2009

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

SUBJECT: Final Decision
FESOP - Renewal
089 - 27389 - 00107

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:
Michael Carpinello, VP
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Thomas W. Easterly
Commissioner

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(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

October 19, 2009

TO: Gary Public Library

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

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

Applicant Name: HARSCO - Reed Minerals
Permit Number: 089 - 27389 - 00107

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	LPOGOST 10/19/2009 HARSCO - Reed Minerals Division 089 - 27389 - 00107 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Dion Mulcahy HARSCO - Reed Minerals Division 7100 W 9th Avenue Gary IN 46406 (Source CAATS) Via confirmed delivery									
2		Michael Carpinello VP HARSCO - Reed Minerals Division PO Box 0515 Camp Hill PA 17001 (RO CAATS)									
3		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 (Affected Party)									
4		Gary Mayors Office 401 Broadway # 203 Gary IN 46402 (Local Official)									
5		Gary Public Library 4030 W 5th Avenue Gary IN 46402 (Library)									
6		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)									
7		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)									
8		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)									
9		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)									
10		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)									
11		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)									
12		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)									
13		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)									
14		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)									
15		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Mail Code 61-53

IDEM Staff	LPOGOST 10/19/2009 HARSCO - Reed Minerals Division 27389 (draft/final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Barbara G. 506 Lilac Street East Chicago IN 46312 (Affected Party)										
2		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)										
3		Mr. James M. Hauck Hatchett & Hauck 111 Monument Circle Suite 301 Indianapolis IN 46204 (Attorney)										
4		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)										
5		Calumet Township Trustee 35 E 5th Avenue Gary IN 46402 (Affected Party)										
6		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)										
7		Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)										
8		Doreen Carey Gary Dept. of Environmental Affairs 839 Broadway N206 Gary IN 46402 (Local Official)										
9												
10												
11												
12												
13												
14												
15												

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