



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

August 9, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Reed Minerals - Plant 14 / 089-16215-00107

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 9/16/03



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**A NEW SOURCE REVIEW AND A
FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY
AND
GARY DEPARTMENT OF ENVIRONMENTAL AFFAIRS**

**Reed Minerals – Plant 14
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 provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and 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. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Operation Permit No.: F089-16215-00107	
Issued by: Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 9, 2004 Expiration Date: August 9, 2009

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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) and Gary Department of Environmental Affairs (GDEA). The information describing the source contained in conditions A.1, A.3, and A.4 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 plant and a portable slag processing plant.

Authorized individual:	Director of Operations – Reed Minerals
Source Address:	7100 West 9 th Avenue, Gary Indiana 46406
Mailing Address:	P.O. Box 8888, Camp Hill, PA 17001-8888
General Source Phone:	(219) 944-6250
SIC Code:	3295
County Location:	Lake
Source Location Status:	Nonattainment for 1-hour and 8-hour Ozone, and SO ₂ Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD, Emission Offset Rules, and Nonattainment NSR; 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 Portable Plant (Plant ID: #089-05242), a portable 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 this FESOP.

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

Stationary slag processing plant #089-00107, consisting of the following:

- (a) One (1) natural gas-fired fluid-bed dryer, identified as P01 and constructed in 1990, 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 #14-001) for particulate control, which exhausts through stack E001.
- (b) 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 wet scrubber (identified as #14-002) for particulate control, which exhausts through stack E002. This area consists of the following:
 - (1) Three (3) crushers, identified as P03.

- (2) Thirteen (13) screens, identified as P04.
 - (3) Eight (8) bucket elevators, identified as M01.
 - (4) One (1) conveying system, identified as M05, consisting of eleven (11) conveyors.
 - (5) Six (6) blend silos, identified as M03.
 - (6) Three (3) roofing silos, identified as M06.
 - (7) Eight (8) blasting silos, identified as M04.
- (c) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
- (1) One (1) loading hopper.
 - (2) Three (3) conveyor transfer points.
 - (3) One (1) initial screening operation.

Portable slag processing plant #089-05242, consisting of the following:

- (a) One (1) portable 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 M001 and M002.
 - (3) One (1) natural gas-fired rotary dryer, identified as P001, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE001, and exhausting through stack S001.
 - (4) One (1) conveyor to chute, identified as M003, controlled by baghouse CE002, and exhausting through stack S002.
 - (5) One (1) chute to the screen, identified as M004, controlled by baghouse CE002, and exhausting through stack S002.
 - (6) One (1) Tayler screen, identified as P002, controlled by baghouse CE002, and exhausting through stack S002.
 - (7) One (1) conveyor to the bucket elevator, identified as M005, controlled by baghouse CE002, and exhausting through stack S002.
 - (8) One (1) QC screen, identified as M006, controlled by baghouse CE002, and exhausting through stack S002.
 - (9) One (1) bucket elevator, identified as P003, controlled by baghouse CE002, and exhausting through stack S002.
 - (10) One (1) diesel fired generator, with a maximum power output of 300 horsepower (HP).

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, 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) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) Combustion source flame safety purging on startup.
- (d) 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.
- (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) 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.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Purge double block and bleed valves.
- (k) 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 150,000 tons.
 - (2) One (1) unsaleable pile, with a maximum capacity of 10,000 tons.
 - (3) One (1) fines storage pile.
 - (4) Five (5) slag storage tanks, constructed in 2004.

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

This 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) and GDEA for a Federally Enforceable State Operating Permit (FESOP).

A.6 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

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

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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.

B.2 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.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

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, GDEA, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 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.6 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.7 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.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ and GDEA within a reasonable time, any information that IDEM, OAQ and GDEA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and GDEA copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ and GDEA 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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ, and GDEA 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.10 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.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.11 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

- (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 and GDEA 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, IDEM, OAQ and GDEA may require to determine the compliance status of the source.

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

B.12 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

The PMP extension notification does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ and GDEA upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and GDEA. IDEM, OAQ and GDEA 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 PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.13 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 describes 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 Northwest Regional Office and GDEA within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAQ:

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

Northwest Regional Office:

Telephone No.: 1-888-209-8892, or

Telephone No. 219-757-0265

Facsimile No.: 219-757-0267

Gary Department of Environmental Affairs

Telephone Number: 219-882-3007

Facsimile Number: 219-882-3012

- (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 Branch, Office of Air Quality

100 North Senate Avenue, P.O. Box 6015

Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs

504 North Broadway, Suite 1012

Gary, Indiana 46402

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 the "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) IDEM, OAQ and GDEA 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 and GDEA 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.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

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

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

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 FESOP 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 the “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 and GDEA 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 and GDEA 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 and GDEA at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and GDEA 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 GDEA, 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 the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) 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 and GDEA on or before the date it is due.
- (2) If IDEM, OAQ and GDEA upon receiving a timely and complete 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.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
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 and GDEA 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 and GDEA any additional information identified as 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

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 this source that are described in 326 IAC 2-8-15(b) through (d), without 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 emissions allowable under 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

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 which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and GDEA 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 increases and decreases in emissions in 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 and GDEA or U.S. EPA is required.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC13-30-3-1]

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 and GDEA, 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(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 and GDEA 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 and GDEA 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 317-233-4320 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.3 and A.4.

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions 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 shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
 - (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 (Prevention of Significant Deterioration), potential to emit particulate matter (PM) from the entire source shall be limited to less than two-hundred and fifty (250) tons per twelve (12) consecutive month period.
- (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.

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(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 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 6-1-11.1]

Pursuant to 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) 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, submitted on January 24, 2003. This plan is attached as Attachment A.

C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

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

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

C.10 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 and GDEA.

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

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

- (b) The Permittee shall notify IDEM, OAQ and GDEA 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 the “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 and GDEA not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and GDEA if the Permittee submits to IDEM, OAQ and GDEA 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.11 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.12 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. 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 Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

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

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

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

C.13 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.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ and GDEA approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

within ninety (90) days from the date of issuance of this permit.

The ERP does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (c) If the ERP is disapproved by IDEM, OAQ and GDEA the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ and GDEA that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.16 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.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ, GDEA upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee’s current Compliance Response Plan and the Permittee

documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ and GDEA of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 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 and GDEA 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 and GDEA that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ and GDEA may extend the retesting deadline.
- (c) IDEM, OAQ and GDEA 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.19 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.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source 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. 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402

- (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 and GDEA 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 the “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years.

Stratospheric Ozone Protection

C.21 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 FACILITY CONDITIONS

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

The stationary slag processing plant #089-00107, consisting of the following:

- (a) One (1) natural gas-fired fluid-bed dryer, identified as P01 and constructed in 1990, 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 #14-001) for particulate control, which exhausts through stack E001.
- (b) 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 wet scrubber (identified as #14-002) for particulate control, which exhausts through stack E002. This area consists of the following:
 - (1) Three (3) crushers, identified as P03.
 - (2) Thirteen (13) screens, identified as P04.
 - (3) Eight (8) bucket elevators, identified as M01.
 - (4) One (1) conveying system, identified as M05, consisting of eleven (11) conveyors.
 - (5) Six (6) blend silos, identified as M03.
 - (6) Three (3) roofing silos, identified as M06.
 - (7) Eight (8) blasting silos, identified as M04.
- (c) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
 - (1) One (1) loading hopper.
 - (2) Three (3) conveyor transfer points.
 - (3) One (1) initial screening operation.

(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.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 dryer P01 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

D.1.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.732(a), the PM emissions from dryer P01 shall not exceed 0.025 grain per dry standard cubic foot (gr/dscf).

D.1.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

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

- (a) The PM/PM10 emissions from dryer P01 shall not exceed 3.5 lbs/hr. This is equivalent to 15.3 tons of PM/PM10 emissions per year.

- (b) The PM/PM10 emissions from the processing area shall not exceed 9.0 lbs/hr. This limit is equivalent to 39.4 tons of PM/PM10 emissions per year.
- (c) The PM/PM10 emissions from each of the units at the raw slag handling operation shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Loading Hopper	1.00
Each of the Three (3) Conveyor Transfer Points	0.50
Screening Operation	2.00

This is equivalent to 19.7 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from the portable slag processing plant (#089-05242) 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. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

D.1.4 PM10 Limitations [326 IAC 6-1-10.1]

Pursuant to 326 IAC 6-1-10.1(d)(31) (Lake County PM10 Emission Requirements),

- (a) The PM10 emissions from dryer P01 shall not exceed 0.015 grain per dry standard cubic foot (gr/dscf) and 3.5 lbs/hr.
- (b) The PM10 emissions from the dry slag processing area shall not exceed 0.015 gr/dscf and 9.0 lbs/hr.

D.1.5 PM Limitations [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the raw slag handling operation shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.1.6 Lake County Particulate Matter Contingency Measures [326 IAC 6-1-11.2]

Pursuant to 326 IAC 6-1-11.2, upon notification from IDEM, OAQ and GDEA 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 6-1-11.2 within one hundred eighty (180) days of the initial notification.

D.1.7 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.734(d), the Permittee shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the following parameters for scrubber #14-001 (which is used to control the particulate emissions from dryer P01):

- (a) Pressure drop; and
- (b) Scrubbing liquid flow rate.

D.1.8 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.1.9 PM and PM10 Control

In order to comply with Conditions D.1.2, D.1.3, D.1.4, and D.1.5 scrubbers #14-001 and #14-002 controlling the PM and PM10 emissions from the dryer P01 and the dry slag processing area shall be in operation and control PM/PM10 emissions at all times that these units are in operation.

D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to document compliance with Conditions D.1.2, D.1.3, D.1.4, and D.1.5 within ninety (90) days after issuance of this permit, the Permittee shall conduct PM and PM10 performance tests for the dryer P01 and the dry slag processing area utilizing methods as 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. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable PM10 and condensable PM10.

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

D.1.11 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts from the scrubbers 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 shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

D.1.12 Parametric Monitoring [40 CFR 60, Subpart UUU]

The Permittee shall monitor and record the pressure drop and the flow rate for scrubbers #14-001 and #14-002 at the frequency specified in the table below, when the dryer P01 or the dry slag processing area is in operation. Unless operated under conditions for which the Compliance Response Plan 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/min)
#14-001	Continuous	6.0 – 10.0	225
#14-002	Once per shift	6.0 – 10.0	450

The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside the above mention range or the flow rate is below the above mentioned minimum.

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

D.1.13 Scrubber Inspections

An inspection shall be performed each calendar quarter of each scrubber controlling the dryer or the dry slag processing area. Inspections required by this condition shall not be performed in consecutive months.

D.1.14 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a deviation from this permit.

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

D.1.15 Record Keeping Requirements

- (a) To document compliance with Condition D.1.11, the Permittee shall maintain once per shift records of visible emission notations of the stack exhausts from the scrubbers and each of the raw slag handling operations.
- (b) To document compliance with Conditions D.1.7, and D.1.12, the Permittee shall maintain the following parameters for each scrubber during normal operation:
 - (1) The total static pressure drop; and
 - (2) Flow rate.
- (c) To document compliance with Condition D.1.13, the Permittee shall maintain records of the results of the inspections required under Condition D.1.13.
- (d) To document compliance with Condition D.1.8, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY CONDITIONS

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

The portable slag processing plant #089-05242, consisting of the following:

- (a) One (1) portable 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 M001 and M002.
 - (3) One (1) natural gas-fired rotary dryer, identified as P001, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE001, and exhausting through stack S001.
 - (4) One (1) conveyor to chute, identified as M003, controlled by baghouse CE002, and exhausting through stack S002.
 - (5) One (1) chute to the screen, identified as M004, controlled by baghouse CE002, and exhausting through stack S002.
 - (6) One (1) Tayler screen, identified as P002, controlled by baghouse CE002, and exhausting through stack S002.
 - (7) One (1) conveyor to the bucket elevator, identified as M005, controlled by baghouse CE002, and exhausting through stack S002.
 - (8) One (1) QC screen, identified as M006, controlled by baghouse CE002, and exhausting through stack S002.
 - (9) One (1) bucket elevator, identified as P003, controlled by baghouse CE002, and exhausting through stack S002.
 - (10) One (1) diesel fired generator, with a maximum power output of 300 horsepower (HP).

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.2.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

D.2.2 Federally Enforceable State Operating Permit [326 IAC 2-8]

The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application.

Effective Date of the Permit

D.2.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.2.4 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.2.5 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 dryer P001 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

D.2.6 Particulate Matter Emission Limitation [326 IAC12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.732, the PM emissions from dryer P001 shall not exceed the following:

- (a) 0.025 grain per dry standard cubic foot (gr/dscf); and
- (b) 10% opacity.

D.2.7 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

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

- (a) The PM/PM10 emissions from the Baghouse CE001, which is used to control the portable dryer P001, shall not exceed 1.00 lbs/hr. This limit is equivalent to 4.38 tons/yr of PM/PM10 emissions.
- (b) The PM/PM10 emissions from the Baghouse CE002, which is used to control the conveyors and the screening operations of the portable plant, shall not exceed 0.05 lbs/hr. This limit is equivalent to 0.22 tons/yr of PM/PM10 emissions.
- (c) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of the portable slag process plant shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Feed Hopper	0.22
Each of the Two (2) Uncontrolled Conveyor Transfer Points	0.10

This is equivalent to 1.84 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from the stationary slag processing plant (#089-00107), the portable generator, 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. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

D.2.8 PM Limitations [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from each unit of the portable plant shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.2.9 Lake County Particulate Matter Contingency Measures [326 IAC 6-1-11.2]

Pursuant to 6-1-11.2, upon notification from IDEM, OAQ and GDEA 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 6-1-11.2 within one hundred eighty (180) days of the initial notification.

D.2.10 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 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 from dryer P001 (controlled by baghouse CE0001) to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.

D.2.11 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.2.12 PM and PM10 Control

In order to comply with Conditions D.2.5, D.2.6, and D.2.7, baghouses CE001 and CE002 shall be in operation and control emissions at all times that the portable dryer or the portable slag handling processes are in operation.

D.2.13 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 60, Subpart UUU]

In order to document compliance with Conditions D.2.5, D.2.6(a), and D.2.7, within 60 days after achieving the maximum production, but not later than 180 days after initial startup of this unit, the Permittee shall conduct PM performance test for the dryer P001 utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.2.14 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts from baghouse CE002 and from each of the uncontrolled slag handling operations shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan –

Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

D.2.15 Parametric Monitoring

The Permittee shall record the total static pressure drop across baghouses CE001 and CE002, used in conjunction with the portable dryer and the portable slag handling operations, at least once per shift 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 - Compliance Response Plan – Preparation, Implementation, Records and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE001	3.0 – 5.5
CE002	3.0 – 5.5

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

D.2.16 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the portable dryer and the portable slag processing operations. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.2.17 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ and GDEA of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

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

D.2.18 Record Keeping Requirements

- (a) To document compliance with Condition D.2.10, the Permittee shall maintain daily records of visible emissions from the stack exhaust from baghouse CE001.
- (b) To document compliance with Condition D.2.14, the Permittee shall maintain once per shift records of visible emission notations of the stack exhausts from the baghouse CE002 and from each of the uncontrolled slag handling operations.
- (c) To document compliance with Condition D.2.15, the Permittee shall maintain the total static pressure drop during normal operation for the baghouses.
- (d) To document compliance with Condition D.2.16, the Permittee shall maintain records of the results of the inspections required under Condition D.2.16.
- (e) To document compliance with Condition D.2.11, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) 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.

(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.3.1 PM Limitations [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the welding operation shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

SECTION D.4 FACILITY CONDITIONS

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

- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) Combustion source flame safety purging on startup.
- (d) 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.
- (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) 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.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Purge double block and bleed valves.
- (k) 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 150,000 tons.
 - (2) One (1) unsaleable pile, with a maximum capacity of 10,000 tons.
 - (3) One (1) fines storage pile.
 - (4) Five (5) slag storage tanks, constructed in 2004.

(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 specifically applicable state or federal requirements to these units.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Reed Minerals – Plant 14
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888
FESOP No.: 089-16215-00107

**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 BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967
and
Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402
Phone: 219-882-3007
Fax: 219-882-3012**

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

Source Name: Reed Minerals – Plant 14
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888
FESOP No.: 089-16215-00107

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), 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 DATA SECTION
and
Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402
Phone: 219-882-3007
Fax: 219-882-3012**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Reed Minerals – Plant 14
Source Address: 7100 West 9th Avenue, Gary, Indiana 46406
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888
FESOP No.: 089-16215-00107

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. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do 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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A

FUGITIVE DUST CONTROL PLAN Reed Minerals- Plant 14 7100 West 9th Avenue

Gary, Indiana

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 yd.2 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 course 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 a 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 the 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. Plan Implementation

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

Date of update: January 15, 2003.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name: Reed Minerals - Plant 14
Source Location: 7100 West 9th Avenue, Gary, Indiana 46406
County: Lake
SIC Code: 3295
Operation Permit No.: 089-16215-00107
Permit Reviewer: ERG/YC

On July 5, 2004, the Office of Air Quality (OAQ) had a notice published in the Times, Munster, Indiana, stating that Reed Minerals – Plant 14 had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a slag processing plant with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified, if applicable, to reflect these changes.

1. Since this source is located in Gary, Indiana, this permit will be issued by IDEM, OAQ and Gary Department of Environmental Affairs (GDEA). Therefore, the Permittee is required to notify GDEA for any permit actions, and to submit to GDEA a copy of the reports and notifications required by this permit. This change has been made throughout the permit. In addition, the contact information for GDEA is listed below and has been added to the permit:

Gary Department of Environmental Affairs
504 North Broadway, Suite 1012
Gary, Indiana 46402
Phone: 219-882-3007
Fax: 219-882-3012

2. The source does not have structural steel or bridge fabrication activities, or activities associated with the transportation and treatment of sanitary sewage. Therefore, these activities have been removed from the insignificant activity list at this source and Condition A.4 and Section D.4 have been revised as follows:

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, as defined in 326 IAC 2-7-1(21):

.....

~~(g) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables.~~

- ~~(h)~~ Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) 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.
- (ik) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Purge double block and bleed valves.
- (k) 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:

.....

SECTION D.4 FACILITY CONDITIONS

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

.....

- ~~(g)~~ Structural steel and bridge fabrication activities using 80 tons or less of welding consumables.
- ~~(h)~~ Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.
- (gi)** Paved and unpaved roads and parking lots with public access.
- (hj)** 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.
- (ik)** Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (jl)** Purge double block and bleed valves.
- ~~(km)~~ 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:
.....

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

3. The significant and the insignificant activities at this source are listed in Conditions A.3 and A.4, respectively. Therefore, Condition B.23 has been corrected as follows:

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

(a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections ~~A.2 and A.3~~ **and A.4**.

4. The requirements of 40 CFR 60, Subpart UU only applies to the dryers at this source. For clarification purposes, Condition D.2.10 has been revised as follows:

D.2.10 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 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 **from dryer P001 (controlled by baghouse CE001)** to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.

5. A baghouse inspection shall be performed each calendar quarter and shall not be performed in consecutive months. Therefore, Condition D.2.16 has been revised as follows:

D.2.16 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the portable dryer

and the portable slag processing operations. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

6. The following changes have been made to Conditions A.3 and D.2 to correct a typographical error:

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

Stationary slag processing plant #089-00107, consisting of the following:

...

Portable slag processing plant #089-05242, consisting of the following:

- (a) One (1) ~~probable~~ **portable** 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:

...

SECTION D.2 FACILITY CONDITIONS

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

The portable slag processing plant #089-05242, consisting of the following:

- (a) One (1) ~~probable~~ **portable** 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:

...

7. For clarification purposes, Condition D.1.11 and D.1.15 have been revised as follows:

D.1.11 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts from the scrubbers 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 shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

...

D.1.15 Record Keeping Requirements

- (a) To document compliance with Condition D.1.11, the Permittee shall maintain once per shift records of visible emission notations of the stack exhausts from the scrubbers and **each of** the raw slag handling operations.

...

8. This source is a minor source under PSD, Emission Offset, and Nonattainment NSR Rules. Therefore, Condition A.1 has been revised as follows:

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

The Permittee owns and operates a stationary slag processing plant and a portable slag processing plant.

Authorized individual: Director of Operations – Reed Minerals
Source Address: 7100 West 9th Avenue, Gary Indiana 46406
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888
General Source Phone: (219) 944-6250
SIC Code: 3295
County Location: Lake
Source Location Status: Nonattainment for 1-hour and 8-hour Ozone, and SO₂
Attainment for all other criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under PSD and, Emission Offset Rules, and
Nonattainment NSR;
Minor Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Reed Minerals - Plant 14
P.O. Box 8888
Camp Hill, PA 17001

Affidavit of Construction

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

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Reed Minerals - Plant 14, 7100 West 9th Avenue, Gary, Indiana, 46406, completed construction of a portable slag processing plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on October 24, 2003 and as permitted pursuant to FESOP 089-16215-00107 issued on _____
5. Additional (?operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit. (Delete this statement if it does not apply.)

Further Affiant said not.

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

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

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

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

Source Background and Description

Source Name: Reed Minerals - Plant 14
Source Location: 7100 West 9th Avenue, Gary, Indiana 46406
County: Lake
SIC Code: 3295
Operation Permit No.: 089-16215-00107
Permit Reviewer: ERG/YC

The Office of Air Quality (OAQ) has reviewed a FESOP application from Reeds Minerals – Plant 14 relating to the operation of an existing stationary slag processing plant and the construction of a portable slag processing plant.

Source Definition

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 Portable Plant (Plant ID: #089-05242), a portable 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.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following stationary permitted emission units and pollution control devices, located at Plant #089-00107:

The stationary slag processing plant #089-00107, consisting of the following:

- (a) One (1) natural gas-fired fluid-bed dryer, identified as P01 and constructed in 1990, 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 #14-001) for particulate control, which exhausts through stack E001.
- (b) 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 wet scrubber (identified as #14-002) for particulate control, which exhausts through stack E002. This area consists of the following:

- (1) Three (3) crushers, identified as P03.
 - (2) Thirteen (13) screens, identified as P04.
 - (3) Eight (8) bucket elevators, identified as M01.
 - (4) One (1) conveying system, identified as M05, consisting of eleven (11) conveyors.
 - (5) Six (6) blend silos, identified as M03.
 - (6) Three (3) roofing silos, identified as M06.
 - (7) Eight (8) blasting silos, identified as M04.
- (c) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
- (1) One (1) loading hopper.
 - (2) Three (3) conveyor transfer points.
 - (3) One (1) initial screening operation.

Unpermitted Emission Units and Pollution Control Equipment

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

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

The portable slag processing plant #089-05242, consisting of the following:

- (a) One (1) probable 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 M001 and M002.
 - (3) One (1) natural gas-fired rotary dryer, identified as P001, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE001, and exhausting through stack S001.
 - (4) One (1) conveyor to chute, identified as M003, controlled by baghouse CE002, and exhausting through stack S002.
 - (5) One (1) chute to the screen, identified as M004, controlled by baghouse CE002, and exhausting through stack S002.
 - (6) One (1) Tayler screen, identified as P002, controlled by baghouse CE002, and exhausting through stack S002.

- (7) One (1) conveyor to the bucket elevator, identified as M005, controlled by baghouse CE002, and exhausting through stack S002.
- (8) One (1) QC screen, identified as M006, controlled by baghouse CE002, and exhausting through stack S002.
- (9) One (1) bucket elevator, identified as P003, controlled by baghouse CE002, and exhausting through stack S002.
- (10) One (1) diesel fired generator, with a maximum power output of 300 horsepower (HP).

Insignificant Activities

The source also consists of 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) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) Combustion source flame safety purging on startup.
- (d) 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.
- (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables.
- (h) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.
- (i) Paved and unpaved roads and parking lots with public access.
- (j) 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.
- (k) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (l) Purge double block and bleed valves.
- (m) 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 (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 150,000 tons.
- (2) One (1) unsaleable pile, with a maximum capacity of 10,000 tons.
- (3) One (1) fines storage pile.
- (4) Five (5) slag storage tanks, constructed in 2004.

Existing Approvals

The source has been operating under the previous approvals, including, but not limited to the following:

- (a) CP #089-1921-00141, issued on February 5, 1994; and
- (b) Amendment to CP #089-1921-00141, issued on April 5, 1995.

All conditions from previous approvals were incorporated into this FESOP.

Enforcement Issue

- (a) IDEM is aware that the source was not issued a FESOP by December 14, 1996 nor did they submit a Part 70 application by that date.
- (b) IDEM is reviewing this matter and will take appropriate action.

Recommendation

The staff recommends to the Commissioner that the FESOP 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 administratively complete FESOP renewal application for the purposes of this review was received on July 17, 2002. Additional information was received on January 24, 2003, February 24, 2003, October 24, 2003, January 16, 2004, March 26, 2004, April 29, 2004, and April 30, 2004.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Pages 1 through 9).

Unrestricted Potential to Emit

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

Pollutant	Potential to Emit (tons/yr)
PM	Greater than 250
PM-10	Greater than 250
SO ₂	2.79
VOC	9.19
CO	23.1
NO _x	57.8

HAPs	Potential to Emit (tons/yr)
Total	Negligible

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10 is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) Pursuant to 326 IAC 2-8, this source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict PTE to below Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP).
- (c) Fugitive Emissions
 Since this type of operation is not in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this 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/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Dryer P01	Less than 15.3	Less than 15.3	0.07	0.65	9.93	11.8	Negligible
Dry Slag Processing Area	Less than 39.4	Less than 39.4	-	-	-	-	-
Raw Slag Handling Operation	Less than 19.7	Less than 19.7	-	-	-	-	-
Portable Dryer P001	Less than 4.38	Less than 4.38	0.03	0.29	4.42	5.26	Negligible
Controlled Portable Slag Processing Operations	Less than 0.22	Less than 0.22	-	-	-	-	-
Uncontrolled Portable Slag Processing Operations	Less than 1.84	Less than 1.84	-	-	-	-	-
Portable Generator	2.89	2.89	2.69	3.25	8.78	40.7	Negligible
Insignificant Activities	Less than 5.0	Less than 5.0	-	Less than 5.0	-	-	Negligible
Total Emissions	Less than 88.7	Less than 88.7	2.79	Less than 9.19	23.1	57.8	Negligible
Title V Thresholds	NA	100	100	100	100	100	10 for a single HAP and 25 for total HAPs

Note: “-“ pollutant not emitted by the facility.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Maintenance Attainment
SO ₂	Primary Nonattainment
NO ₂	Attainment
1-Hour Ozone	Severe Nonattainment
8-Hour Ozone	Nonattainment
CO	Maintenance Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.
- (1) 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 NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Lake County has been designated as nonattainment in Indiana for the 1-hour ozone standard. 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.
 - (2) VOC and NO_x 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 NO_x emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (b) The portion of Lake County in which this source is located has been designated as primary nonattainment for SO₂. Therefore, SO₂ emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (c) Lake County has been classified as attainment for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions
 Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD and Emission Offset Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	88.7
PM-10	88.7
SO ₂	2.79

VOC	9.19
CO	23.1
NO _x	57.8
Single HAP	Negligible
Combination HAPs	Negligible

- (a) This existing source is not an Emission Offset major source because no regulated nonattainment pollutant is emitted at a rate greater than the Emission Offset major source thresholds (25 tons/yr for VOC and 100 tons/yr for SO₂).
- (b) This existing source is not a PSD major stationary source because no regulated attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.
- (c) These emissions are based upon the limited potential to emit for this source in this FESOP.

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. 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:

Emission Standards

Pursuant to 40 CFR 60.732(a), the PM emissions from the dryers (P01 and P001) at this source shall not exceed 0.025 gr/dscf. Since dryer P01 is controlled by a wet scrubber #14-001, 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 exhausts from dryer P001, which is controlled by a baghouse, shall not exceed 10%.

Monitoring Requirements

For the existing dryer P01, which is controlled by scrubber #14-001, the Permittee 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, pursuant to 40 CFR 60.734(d). 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.

For the new portable dryer P001, which will be controlled by baghouse CE001, 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.

Recordkeeping, Reporting, and Testing Requirements

Dryers P01 and P001 shall also comply with the recordkeeping and reporting requirements in 40 CFR 60.735, and the testing requirements in 40 CFR 60.736.

- (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.
- (c) This source only processes coal slag at this plant, and coal slag does not meet the definition of “nonmetallic mineral” in 40 CFR 60.671. Therefore, the New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plants (40 CFR 60.670-676, Subpart OOO) are not applicable.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR 61, and 40 CFR Part 63) applicable to this source.

State Rule Applicability – Entire Source

326 IAC 2-3 (Emission Offset)

This existing source is located in Lake County, which is nonattainment for Ozone and SO₂. The potential to emit VOC from this source is less than 25 tons/yr and the potential to emit SO₂ is less 100 tons/yr. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

326 IAC 2-2 (PSD) and 327 IAC 2-8-4 (FESOP)

The source was constructed in 1990 and modified in 1995 and 2004 (this modification). The source is not in 1 of 28 source categories as defined in 326 IAC 2-2-1(y)(1). The potential to emit of PM and PM10 before control is each greater than 250 tons/yr. Since it was constructed in 1995, the source has been using particulate control equipment to control PM/PM10 emissions. The actual PM/PM10 emissions from the entire source have never exceeded 250 tons/yr. The modifications in 1995 and 2004 are minor under 326 IAC 2-2 (PSD).

In order to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable, the source has accepted the following requirements:

- (a) The PM/PM10 emissions from dryer P01 shall not exceed 3.5 lbs/hr. This is equivalent to 15.3 tons of PM/PM10 emissions per year. The use of the scrubber #14-001 with 99.5% control efficiency ensures compliance with these limits.

According to the stack test results on September 8, 1994, the PM emissions from dryer P01 after control were 2.09 lbs/hr. Therefore, dryer P01 is in compliance with the PM emission limit above.

- (b) The PM/PM10 emissions from the dry slag processing area shall not exceed 9.0 lbs/hr. This limit is equivalent to 39.4 tons of PM/PM10 emissions per year. The use of the scrubber #14-002 with 99.5% control efficiency ensures compliance with these limits.

According to the stack test results on September 8, 1994, the PM emissions from the dry slag processing area after control were 4.83 lbs/hr. Therefore, the processing area is in compliance with the PM limit above.

- (c) The PM/PM10 emissions from each of the units at the raw slag handling operation shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Loading Hopper	1.00
Each of the Three (3) Conveyor Transfer Points	0.50
Screening Operation	2.00

This is equivalent to 19.7 tons/yr of PM/PM10 emissions. According to the emission calculations in Appendix A, the PTE of PM/PM10 before control for these units is less than the emission limits in the table above. Therefore, the units at the raw slag handling operation are in compliance with the limits in the table above.

- (d) The PM/PM10 emissions from the Baghouse CE001, which is used to control the portable dryer P001, shall not exceed 1.00 lbs/hr. This limit is equivalent to 4.38 tons/yr of PM/PM10 emissions. According to the emission calculations in Appendix A, the potential to emit PM/PM10 of the dryer after control is less than 4.38 tons/yr. The use of baghouse CE001 ensures compliance with this limit.
- (e) The PM/PM10 emissions from the Baghouse CE002, which is used to control the conveyors and the screening operations of the portable plant, shall not exceed 0.05 lbs/hr. This limit is equivalent to 0.22 tons/yr of PM/PM10 emissions. According to the emission calculations in Appendix A, the potential to emit PM/PM10 from the controlled slag handling operations for the portable plant is less than the limits above. The use of baghouse CE002 with these units ensures compliance with these limits.
- (f) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of the portable slag process plant shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Feed Hopper	0.22
Each of the Two (2) Uncontrolled Conveyor Transfer Points	0.10

This is equivalent to 1.84 tons/yr of PM/PM10 emissions. According to the emission calculations in Appendix A, the PTE of PM/PM10 before control for these units is less than the emission limits in the table above. Therefore, these units are in compliance with these limits.

Combined with the PM/PM10 emissions from the generator 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. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

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

The source was constructed in 1990 and modified in 1995 and 2004. The modification in 2004 does not have potential to emit HAPs greater than 10 tons/yr for a single HAP or greater than 25 tons/yr for any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

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 2003. 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 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4, the source shall not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.

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 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements)

This source is located in Lake County and is one of the sources listed under 326 IAC 6-1-11.1(2). Therefore, this source is subject to the requirements in 326 IAC 6-1-11.1. Pursuant to 326 IAC 6-1-11.1, the fugitive particulate matter emissions from this source 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 submitted on January 24, 2003.

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 6-1-10.1 (Lake County PM10 Emission Requirements), therefore, the requirements of 326 IAC 6-1-11.2 are applicable to this source. Pursuant to 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 6-1-11.2 within one hundred eighty (180) days of the initial notification.

State Rule Applicability – Fluid Bed Dryer (P01) (Plant #089-00107)

326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements)

This source is one of the sources listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Pursuant to 326 IAC 6-1-10.1(d)(31), the PM10 emissions from dryer P01 shall not exceed 0.015 grain per dry standard cubic foot (gr/dscf) and 3.5 lbs/hr.

According to the stack test conducted on September 8, 1994, the PM emissions from dryer P01 after scrubber #14-001 were 0.014 gr/dscf and 2.09 lbs/hr. Assuming PM emissions are equal to PM10 emissions, dryer P01 is in compliance with the PM10 emission limit of 2.09 lbs/hr. The use of the wet scrubber #14-001 ensures compliance with this limit.

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County and dryer P01 at this source is specifically listed in 326 IAC 6-1-10.1. Therefore, the requirements of 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations) are not applicable to this dryer.

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

The dryer (P01) is subject to the requirements contained in 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Therefore, this dryer is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

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

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

State Rule Applicability - Dry Slag Processing Area (Plant #089-00107)

326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements)

This source is one of the sources listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Pursuant to 326 IAC 6-1-10.1(d)(31), the PM10 emissions from the dry slag processing area shall not exceed 0.015 gr/dscf and 9.0 lbs/hr.

According to the stack test conducted on September 8, 1994, the PM emissions from this processing area after scrubber #14-002 were 0.014 gr/dscf and 4.83 lbs/hr. Assuming PM emissions are equal to PM10 emissions, this dry slag processing area is in compliance with the PM10 emission limit of 9.0 lbs/hr. The use of wet scrubber #14-002 ensures compliance with this limit.

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County and the dry slag processing area at this source is specifically listed in 326 IAC 6-1-10.1. Therefore, the requirements of 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations) are not applicable to this processing area.

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

This processing area is subject to the requirements contained in 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Therefore, this dry slag processing area is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

State Rule Applicability - Raw Slag Handling Operation (Plant #089-00107)

326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements)

This source is one of the sources listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). However, the raw slag handling operation is not specifically listed in 326 IAC 6-1-10.1. Therefore, the raw slag handling operation is not subject to 326 IAC 6-1-10.1.

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County and the raw slag handling operation is not specifically listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). However, the potential to emit particulate from this source is greater than 100 tons/yr. Therefore, the raw slag handling operation is subject to 326 IAC 6-1-2. Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the raw slag handling operation shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

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

This raw slag handling operation is subject to the requirements contained in 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations). Therefore, this handling operation is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

State Rule Applicability – Dryer P001 of the Portable Plant (Plant #089-05242)

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County. However, the proposed dryer P001 is not specifically listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Since the potential to emit particulate from this source is greater than 100 tons/yr, dryer P001 is subject to 326 IAC 6-1-2. Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from dryer P001 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

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

Dryer P001 is subject to the requirements contained in 326 IAC 6-1-2 (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 7-4-1 (Lake County SO₂ Emission Limitations)

The potential to emit SO₂ from dryer P001 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 7-4-1 are not applicable.

State Rule Applicability – Slag Handling Operations of the Portable Plant (Plant #089-05242)

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

The slag handling operations of the proposed portable plant are not specifically listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). However, the potential to emit particulate from this source is greater than 100 tons/yr. Therefore, slag handling operations of the proposed portable plant are subject to 326 IAC 6-1-2. Pursuant to 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from each of the slag handling operations of the proposed portable plant shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

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

The slag handling operations of the proposed portable plant are subject to the requirements in 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations). Therefore, these operations are exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

State Rule Applicability – Portable Diesel Generators (Plant #089-05242)

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

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable.

326 IAC 10-1 (Nitrogen Oxide Emission Requirements)

This source is not located in Clark or Floyd County. Therefore, the requirements of 326 IAC 10-1 are not applicable.

State Rule Applicability – Welding Operation (Insignificant Activity)

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County. However, the insignificant welding operation at this source is not specifically listed under 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements). Since the potential to emit particulate from this source is greater than 100 tons/yr, the welding operation at this source is subject to 326 IAC 6-1-2. Pursuant to 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the welding operation shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

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

The welding operation at this source is subject to the requirements in 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations). Therefore, this welding operation is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

Testing Requirements

The potential to emit PM/PM10 (major pollutants) before control from the dryer P01 and the dry slag processing area of the stationary slag processing plant are responsible for a large portion of the total PM10/PM PTE from the entire source. In order to demonstrate compliance with the FESOP limits, the PSD minor limits, and the emission limit in 40 CFR 60, Subpart UUU for dryer P01, the Permittee shall conduct PM and PM10 stack testing for dryer P01 (controlled by scrubber #14-001) and the dry slag processing area (controlled by scrubber #14-002).

The source performed stack tests for scrubbers #14-001 and #14-002 in 1994. Within ninety (90) days after issuance of this permit, the Permittee shall conduct PM and PM10 performance tests for the dryer P001 and the dry slag processing area utilizing methods as approved by the Commissioner. The stack tests shall be repeated at least once every five years from the date of the last valid compliance demonstration. PM10 includes filterable PM10 and condensable PM10.

The portable dryer P001 is a new emission unit. In order to demonstrate compliance with the PM emission limit in 40 CFR 60, Subpart UUU for this dryer, the Permittee shall perform a PM stack test for dryer P001 within 60 days after achieving the maximum production, but not later than 180 days after initial startup of this unit.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

1. Dryer P01 (which is controlled by scrubber #14-001) and the dry slag processing area (which is controlled by scrubber #14-002) have applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the scrubber exhausts (stacks E001 and E002) shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
 - (b) The Permittee shall monitor and record the pressure drop and the flow rate for scrubbers #14-001 and #14-002, at the frequency specified in the table below when the dryer P01 or the dry slag processing area is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber and the flow rate shall be maintained with the ranges listed in the table below or levels determined during the latest compliant stack test:

Scrubber ID	Monitoring Frequency	Pressure Drop Range (inches of water)	Minimum Flow Rate (gallons/min)
#14-001	Continuous	6.0 – 10.0	225
#14-002	Once per shift	6.0 – 10.0	450

The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside the above mention range or the flow rate is below the above mentioned minimum.

- (c) An inspection shall be performed each calendar quarter for the scrubbers. 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.

These monitoring conditions are necessary because scrubber #14-001 for dryer P01 and scrubber #14-002 for the slag processing area must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), and NSPS, Subpart UUU.

2. The proposed dryer P001 (which is controlled by baghouse CE001) and the proposed slag handling operations (which is controlled by baghouse CE002) at the portable slag processing plant have applicable compliance monitoring conditions as specified below:
- (a) Pursuant to 326 IAC 12 and 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.
 - (b) Visible emissions notations of the stack exhaust from Baghouse CE002 (stack S002) shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
 - (c) The Permittee shall record the total static pressure drop across the baghouses at least once per shift when dryer P001 or one of the slag handling operations at the portable plant is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range listed in the table below or a range established during the latest stack test.

Baghouse ID	Pressure Drop Range (inches of water)
CE001	3.0 – 5.5
CE002	3.0 – 5.5

The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

- (d) An inspection shall be performed each calendar quarter of all bags controlling the portable dryer P001 and the slag handling operations of the portable plant. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced. In the event that bag failure has been observed:

- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (2) For single compartment baghouses, 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.

These monitoring conditions are necessary because baghouse CE001 for the portable dryer P001 and baghouse CE002 for the portable slag handling operations must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), and NSPS, Subpart UUU.

3. The uncontrolled slag handling operations have applicable compliance monitoring conditions as specified below:

Visible emissions notations of the hoppers, transfer points, and screen exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

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).

Conclusion

The operation of this stationary slag processing plant (Plant #089-00107) and the construction and operation of the portable slag processing plant (Plant ID #089-05242) shall be subject to the conditions of the FESOP 089-16215-00107.

Appendix A: Emission Calculations

**Criteria Pollutant Emissions
From the 27 MMBtu/hr Dryer (P01)**

Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004

Heat Input Capacity
MMBtu/hr

27.0

Potential Throughput
MMCF/yr

236.5

Wet Scrubber
Control Efficiency

99.5% (for PM/PM10 only)

Emission Factor	Pollutant					
	PM*	PM10*	**SO ₂	**NO _x	**VOC	**CO
	2.09 (lbs/hr)	2.09 (lbs/hr)	0.6 (lbs/MMCF)	100 (lbs/MMCF)	5.5 (lbs/MMCF)	84.0 (lbs/MMCF)
Potential to Emit after Control in tons/yr	9.15	9.15	0.07	11.8	0.65	9.93
Potential to Emit before Control in tons/yr	1,831	1,831	0.07	11.8	0.65	9.93

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

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

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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 (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lbs

PTE of PM/PM10 before Control (tons/yr) = Emission Rate (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10 after Control (tons/yr) = PTE of PM/PM10 before Control (tons/yr) / (1 - Control Efficiency)

**Appendix A: Emission Calculations
PM/PM10 Emissions
From the Processing Area**

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Max. Throughput tons/hr	Wet Scrubber Control Efficiency					
65	99.5% (for PM/PM10 only)					
	Pollutant					
Pollutant	PM	PM10	SO ₂	NO _x	VOC	CO
*Potential to Emit after Control (lbs/hr)	4.83	4.83	-	-	-	-
Potential to Emit after Control (ton/yr)	21.2	21.2	-	-	-	-
Potential to Emit before Control (ton/yr)	4,231	4,231	-	-	-	-

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

Methodology

Potential to Emit after Control (tons/yr) = Max. Throughput Rate (lbs/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

Potential to Emit before Control (tons/yr) = Max. Throughput Rate (lbs/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs x (1-Control Efficiency)

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

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Maximum Throughput Rate:

75

 (tons/hr)

Process	Number of Units	PM10 Emission Factor (lbs/ton)	Uncontrolled PTE of PM10 (lbs/hr/unit)	Uncontrolled PTE of PM10 (tons/yr)	PM Emission Factor (lbs/ton)	Uncontrolled PTE of PM (lbs/hr/unit)	Uncontrolled PTE of PM (tons/yr)
*Feed Hopper	1	0.0043	0.32	1.41	0.0088	0.66	2.89
**Conveyor Transfer Points	3	0.0011	0.08	1.08	0.0029	0.22	2.86
** Screening	1	0.0087	0.65	2.86	0.025	1.88	8.21
Total				5.35			14.0

* There is no emission factor in AP-42 for slag handling process. This emission factor is the one for low silt batch drop for iron and steel mill in AP-42, Table 12.5.4 (10/86), which is the most similar loading process in AP-42.

** Emission factors are from AP-42, Chapter 11.19, Table 11.19.2-2 - Crushed Stone Processing Operations (Draft AP-42, 06/03).

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

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

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Maximum Throughput Rate:
 (tons/hr)

Control Equipment

Process	Number of Units	PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 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 after Control (tons/yr)	PTE of PM after Control (tons/yr)
*Dryer	1	3.7	92.5	405	3.7	92.5	405	99%	4.05	4.05
** Conveyor and Chute Transfer Points	4	0.0011	0.03	0.48	0.0029	0.07	1.27	99%	4.82E-03	1.27E-02
** Screening	1	0.0087	0.22	0.95	0.025	0.63	2.74	99%	0.01	0.03
Total				407			409			4.09

* There is no emission factor in AP-42 for slag drying process. This emission factor is the one for coal cleaning in AP-42, Table 11.10-1(11/95). Assume PM10 emissions equal PM emissions.

** Emission factors are from AP-42, Chapter 11.19, Table 11.19.2-2 - Crushed Stone Processing Operations (Draft AP-42, 06/03).

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

PTE after Control (tons/yr) = PTE before Control (tons/yr) x (1-Control Efficiency)

**Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From the 12 MMBtu/hr Portable Dryer (P001)**

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

12.0

105.1

	Pollutant					
	PM*	PM10*	**SO ₂	**NO _x	**VOC	**CO
Emission Factor in lb/MMCF	-	-	0.6	100	5.5	84.0
Potential to Emit in tons/yr	-	-	0.03	5.26	0.29	4.42

* Potential to emit PM/PM10 from the dryer was calculated in page 4 of this appendix.

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

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Methodology

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

PTE of (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lbs

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

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Maximum Throughput Rate:

25

 (tons/hr)

Process	Number of Units	PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)
*Feed Hopper	1	0.0043	0.11	0.47	0.0088	0.22	0.96
**Conveyor Transfer Points	2	0.0011	0.03	0.24	0.0029	0.07	0.64
Total				0.71			1.60

* There is no emission factor in AP-42 for slag handling process. This emission factor is the one for low silt batch drop for iron and steel mill in AP-42, Table 12.5.4 (10/86), which is the most similar loading process in AP-42.

** Emission factors are from AP-42, Chapter 11.19, Table 11.19.2-2 - Crushed Stone Processing Operations (Draft AP-42, 06/03).

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

**Appendix A: Emission Calculations
Internal Combustion Engines**

From the Diesel Generator for the Portable Plant

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

Power Output
Horse Power

300

Emission Factor in lb/HP-hr	Pollutant					
	PM*	PM10*	SO ₂	NO _x	**VOC	CO
	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
Potential to Emit in tons/yr	2.89	2.89	2.69	40.7	3.25	8.78

Emission factors are from AP-42, Chapter 3.3, Table 3.3-1, SCC #2-02-001-02 and 2-03-001-01(AP-42 Supplement B, 10/96).

*Assume PM10 emissions are equal to PM emissions.

** Assume TOC (total organic compounds) emissions are equal to VOC emissions.

Methodology

Emission (tons/yr) = Power Output (HP) x Emission Factor (lb/HP-hr) x 8760 hr/yr x 1 ton/2000 lbs

**Appendix A: Emission Calculations
Fugitive Emissions
From the Unpaved Roads (Fugitive Emissions)**

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

1. Emission Factors:

According to AP42, Chapter 13.2.2 - Unpaved Roads (AP-42, 12/03), the PM/PM 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 and 1.5 for PM10
a = empirical constants = 0.7 for PM and 0.9 for PM10
b = empirical constants = 0.45 for both PM and PM10
P = number of precipitation days = 120 days/yr

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

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

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)
Freight Carriers	40.0	1.6	0.40	11,213	30.0%	12.0	10.2	1.90
Dump Trucks	40.0	3.1	0.40	21,725	58.2%	23.3	19.8	3.68
Dump Trucks	27.5	1.0	0.25	4,380	11.7%	3.23	3.99	0.74
Total				37,318	100%	38.5	34.0	6.33

* 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%.

$$\begin{aligned} \text{PTE of PM after Control (tons/yr)} &= 34.0 \text{ tons/yr} \times (1-90\%) = && \mathbf{3.40 \text{ tons/yr}} \\ \text{PTE of PM10 after Control (tons/yr)} &= 6.33 \text{ tons/yr} \times (1-90\%) = && \mathbf{0.63 \text{ tons/yr}} \end{aligned}$$

**Appendix A: Emission Calculations
PM and PM10 Emissions
From the Slag Storage Piles (Fugitive Emissions)**

**Company Name: Reed Minerals - Plant 14
Address: 7100 W. 9th Ave., Gary, IN 46406
FESOP #: 089-16215-00107
Reviewer: ERG/YC
Date: March 26, 2004**

1. Emission Factors:

According to AP42, Chapter 13.2.4 - Aggregate Handling and Storage Piles (AP-42, 01/95), the PM/PM10 emission factors for aggregate handling process can be estimated from the following equation:

$$E_f = \frac{k \times 0.0032 \times (U/5)^{1.3}}{(M/2)^{1.4}}$$

where:

E _f = Emission Factor (lbs/ton)	
k = Particle size multipliers =	0.74 for PM and 0.35 for PM10
U = Mean wind speed (mph) =	10 mph
M = Moisture content (%) =	4 % (provided by the source)

Therefore,

PM Emission Factor =	0.0022 lbs/ton process
PM10 Emission Factor =	0.0010 lbs/ton process

2. Potential to Emit PM/PM10 before Control:

Max. Throughput Rate: 100 tons/hr (total)

PTE of PM (tons/yr) = 100 ton/hr x 0.0022 lbs/ton x 8760 hr/yr x 1 tons/2000 lbs = 0.97 tons/yr

PTE of PM10 (tons/yr) = 100 ton/hr x 0.0010 lbs/ton x 8760 hr/yr x 1 tons/2000 lbs = 0.46 tons/yr