NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Federally Enforceable State Operating Permit (FESOP)

for Harsco Minerals in Lake County

FESOP Renewal No.: F089-40947-00107

The Indiana Department of Environmental Management (IDEM) has received an application from Harsco Minerals located at 7100 West 9th Avenue Gary, Indiana 46406 for a renewal of its FESOP issued on October 19, 2009. If approved by IDEM’s Office of Air Quality (OAQ), this proposed renewal would allow Harsco Minerals to continue to operate its existing source.

This draft permit does not contain any new equipment that would emit air pollutants, and no conditions from previously issued permits/approvals have been changed.

A copy of the permit application and IDEM’s preliminary findings are available at:

Gary Public Library and Cultural Center
220 West 5th Avenue
Gary, Indiana 46402

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting,
you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number F089-40947-00107 in all correspondence.

Comments should be sent to:

Carson Wright  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800)-451-6027, ask for Carson Wright or (317) 233-6610  
Or dial directly: (317) 233-6610  
Fax: (317) 232-6749 attn: Carson Wright  
E-mail: ccwright@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM’s response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, at the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Carson Wright of my staff at the above address.

[Signature]
Josiah K. Balogun, Section Chief  
Permits Branch  
Office of Air Quality
Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Harsco Minerals
7100 W 9th Avenue
Gary, Indiana 46406

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

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

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

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

<table>
<thead>
<tr>
<th>Operation Permit No.: F089-40947-00107</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Agency Interest ID: 12537</td>
</tr>
<tr>
<td>Issued by:</td>
</tr>
<tr>
<td>Josiah K. Balogun, Section Chief</td>
</tr>
<tr>
<td>Permits Branch</td>
</tr>
<tr>
<td>Office of Air Quality</td>
</tr>
<tr>
<td>Issuance Date:</td>
</tr>
<tr>
<td>Expiration Date:</td>
</tr>
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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary slag processing plants.

<table>
<thead>
<tr>
<th>Source Address:</th>
<th>7100 W 9th Avenue, Gary, Indiana 46406</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number:</td>
<td>219-944-6250</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3295(Minerals and Earths, Ground or Otherwise Treated)</td>
</tr>
<tr>
<td>County Location:</td>
<td>Lake</td>
</tr>
<tr>
<td>Source Location Status:</td>
<td>Nonattainment for 8-hour ozone standard</td>
</tr>
<tr>
<td></td>
<td>Attainment for all other criteria pollutants</td>
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<tr>
<td>Source Status:</td>
<td>Federally Enforceable State Operating Permit Program</td>
</tr>
<tr>
<td></td>
<td>Minor Source, under PSD and Emission Offset Rules</td>
</tr>
<tr>
<td></td>
<td>Minor Source, Section 112 of the Clean Air Act</td>
</tr>
<tr>
<td></td>
<td>Not 1 of 28 Source Categories</td>
</tr>
</tbody>
</table>

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

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

(a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:

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

(2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:

  (i) Three (3) crushers, identified as P03-14;
  (ii) Eleven (11) screens, identified as P02-14;
  (iii) Eight (8) bucket elevators, identified as M01-14;
  (iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
  (v) Six (6) blend silos, identified as M03-14;
  (vi) Three (3) roofing silos, identified as M05-14;
(vii) Eight (8) blasting silos, identified as M04-14; and
(viii) One (1) chute to blasting silos, identified as M06-14.

(3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:

(i) One (1) loading hopper;
(ii) Three (3) conveyor transfer points; and
(iii) One (1) initial screening operation;

(4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and

(5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.

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

This stationary source also includes the following insignificant activities:

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment;

(b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;

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

(d) Combustion source flame safety purging on startup;

(e) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

(f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(g) Refractory storage not requiring air pollution control equipment;

(h) Paved and unpaved roads and parking lots with public access;

(i) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(k) Purge double block and bleed valves;
Other emission units, not regulated by a NESHAP, with PM10 and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) coal slag pile, with a maximum capacity of 500,000 tons;

(2) One (1) fines pile, with a maximum capacity of 200,000 tons;

(3) One (1) blast furnace slag pile;

(4) Two (2) temporary fines piles;

(5) Two (2) wet screws;

(6) Two (2) front end loading activities to move raw materials and fines;

(7) One (1) load out to truck;

(8) Eight (8) storage silos;

(m) One (1) bagging machine chute for loading jumbo sacks outdoor

(n) One (1) additives loading hopper located outdoors

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

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

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

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

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

(a) This permit, F089-40947-00107, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

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

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

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

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

1. An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
2. The permitted facility was at the time being properly operated;
3. During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
4. For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;
   Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   Facsimile Number: 317-233-6865
   Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553.
5. For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

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

A description of the emergency;

Any steps taken to mitigate the emissions; and
(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

   (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

   (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

      (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

      (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

(a) All terms and conditions of permits established prior to F089-40947-00107 and issued pursuant to permitting programs approved into the state implementation plan have been either:

   (1) incorporated as originally stated,

   (2) revised, or
(3) deleted.

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

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

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

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

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

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

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

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

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

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:
(b) A timely renewal application is one that is:

1. Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request.

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

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

1. The changes are not modifications under any provision of Title I of the Clean Air Act;

2. Any approval required by 326 IAC 2-8-11.1 has been obtained;

3. The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which
document all such changes and emission trades that are subject to
326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available,
upon reasonable request, for public review.

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

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the
applicable SIP provides for such emission trades without requiring a permit revision,
subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating
scenarios that are described in the terms and conditions of this permit in accordance with
326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit
shall not be considered alternative operating scenarios. Therefore, the notification
requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]
A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)]
Upon presentation of proper identification cards, credentials, and other documents as may be
required by law, and subject to the Permittee’s right under all applicable laws and regulations to
assert that the information collected by the agency is confidential and entitled to be treated as
such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform
the following:

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

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

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

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

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

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

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

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

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

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

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

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

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

Entire Source

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source’s potential to emit does not exceed the above specified limits.

(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 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

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

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.
C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(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) Material processing facilities shall include the following:

(1) 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.

(2) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(3) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.
(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:

(A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

(B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or
(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

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

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

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

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

C.11 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

(a) Pursuant to 326 IAC 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP
available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.

(c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

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

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

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

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

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

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

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

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.
(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.
C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.
SECTION D.1  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant 14

(a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:

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

(2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:

(i) Three (3) crushers, identified as P03-14;
(ii) Eleven (11) screens, identified as P02-14;
(iii) Eight (8) bucket elevators, identified as M01-14;
(iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
(v) Six (6) blend silos, identified as M03-14;
(vi) Three (3) roofing silos, identified as M05-14;
(vii) Eight (8) blasting silos, identified as M04-14; and
(viii) One (1) chute to blasting silos, identified as M06-14.

(3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:

(i) One (1) loading hopper;
(ii) Three (3) conveyor transfer points; and
(iii) One (1) initial screening operation;

(4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and

(5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.
**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7.0</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14) Crushers P03-14 Screens P02-14 (all controlled by Baghouse C02-14): Bucket elevators (8) M01-14 Conveyors (9) M02-14 Blend Silos (6) M03-14 Roofing Silos (3) M05-14 Blasting Silos (8) M04-14a Chute to Blasting Silo M06-14</td>
<td>7.0</td>
</tr>
<tr>
<td>Each Conveyor Transfer Point TP01-14</td>
<td>0.5</td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Compliance with these limits, combined with the PM, emissions from Plant 14, and the insignificant activities, shall limit the source-wide potential to emit of PM to less than 250 tons per year and shall render the requirements of 326 IAC 2-2 (PSD), not applicable to the source.
D.1.2 Emission Offset (EO) Minor Limits [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM10 Limit (pounds per hour)</th>
<th>PM2.5 Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14) Crushers P03-14 Screens P02-14</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>(all controlled by Baghouse C02-14): Bucket elevators (8) M01-14 Conveyors (9) M02-14 Blend Silos (6) M03-14 Roofing Silos (3) M05-14 Blasting Silos (8) M04-14a Chute to Blasting Silo M06-14</td>
<td>0.5</td>
<td>0.11</td>
</tr>
<tr>
<td>Each Conveyor Transfer Point TP01-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Compliance with these limits, combined with the PM10, and PM2.5 emissions from Plant 14, and the insignificant activities, shall limit the source-wide potential to emit of PM10 and PM2.5 to less than 100 tons per year, each, and shall render the requirements of 326 IAC 2-3 (Emission Offset), not applicable to this source.
D.1.3 FESOP Limits [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits), not applicable, the Permittee shall comply with the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM10 Limit (pounds per hour)</th>
<th>PM2.5 Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14) Crushers P03-14 Screens P02-14 (all controlled by Baghouse C02-14): Bucket elevators (8) M01-14 Conveyors (9) M02-14 Blend Silos (6) M03-14 Roofing Silos (3) M05-14 Blasting Silos (8) M04-14a Chute to Blasting Silo M06-14 Each Conveyor Transfer Point TP01-14</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

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

D.1.4 Lake County: PM10 Emissions [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-29, Harsco Minerals - Plant #14 PM10 emissions shall not exceed the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM10 Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14 Slag Processing</td>
<td>gr/dscf</td>
</tr>
<tr>
<td>Crushing identified as P03-14a and Screening identified as P02-14a</td>
<td>pound/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>PM10 Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td>9.0</td>
</tr>
</tbody>
</table>
D.1.5 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, particulate matter (PM) emissions from the Plant 14 Slag Drying Process (rotary dryer P01-14), the enclosed dry slag processing operation, and the raw slag handling operation shall not exceed the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>326 IAC 6.8-1-2 PM Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14</td>
<td>(grain per dry standard cubic foot)</td>
</tr>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>0.03</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14)</td>
<td>0.03</td>
</tr>
<tr>
<td>Bucket elevators (8) M01-14</td>
<td></td>
</tr>
<tr>
<td>Conveyors (9) M02-14</td>
<td></td>
</tr>
<tr>
<td>Blend Silos (6) M03-14</td>
<td></td>
</tr>
<tr>
<td>Roofing Silos (3) M05-14</td>
<td></td>
</tr>
<tr>
<td>Blasting Silos (8) M04-14</td>
<td></td>
</tr>
<tr>
<td>Chute to Blasting Silo M06-14</td>
<td></td>
</tr>
<tr>
<td>Raw Slag Handling (all uncontrolled)</td>
<td>0.03</td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td></td>
</tr>
<tr>
<td>Conveyor Transfer Point TP01-14</td>
<td></td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td></td>
</tr>
</tbody>
</table>

D.1.6 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]

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

D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements [326 IAC 2-8-4(1)]

D.1.8 PM, PM10, and PM2.5 Control [326 IAC 2-8-5(a)(4)]

In order to comply with Conditions D.1.1 - PM, PM10, and PM2.5 Limitations, D.1.2 - PM10 Limitations, and D.1.3 - PM Limitations, scrubber CE01-14 controlling the PM, PM10, and PM2.5 emissions from the dryer P01-14, and baghouse CE02-14 controlling the PM, PM10, and PM2.5 emissions from the dry slag processing area shall be in operation and control PM, PM10, and PM2.5 emissions at all times that these units are in operation.
D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1, D.1.2, and D.1.3, the Permittee shall perform PM, PM10, PM2.5 testing on the wet scrubber, identified as CE01-14 controlling the natural gas fired rotary dryer, utilizing methods approved by the commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

(b) Not later than 180 days after the issuance date of this permit, Permit No 089-40947-00107, the Permittee shall perform PM, PM10, PM2.5 testing on Baghouse C02-14 controlling the Enclosed Dry Slag process and its associated processes (Crushers P03-14, Screens P02-14, Bucket elevators (8), M01-14, Conveyors (9), M02-14, Blend Silos (6), M03-14, Roofing Silos (3), M05-14, Blasting Silos (8), M04-14a, Chute to Blasting Silo, M06-14), utilizing methods approved by the commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.1.10 Visible Emissions Notations

(a) Visible emission notations of the scrubber, and baghouse exhaust stacks, and each of the raw slag handling operations (including the hopper, the conveyor transfer points, and the initial screening facility) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.11 Parametric Monitoring

(a) The Permittee shall monitor and record the pressure drop and the flow rate for scrubber CE01-14 at the frequency specified in the table below, when the dryer P01-14 is in operation. Unless operated under conditions for which the Response to Excursions or Exceedances specifies otherwise, the pressure drop across the scrubber and the flow rate shall be maintained with the ranges listed in the table below or determined during the latest compliant stack test:
<table>
<thead>
<tr>
<th>Scrubber ID</th>
<th>Monitoring Frequency</th>
<th>Minimum Pressure Reading (inches of water)</th>
<th>Minimum Flow Rate (gallons per minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE01-14</td>
<td>Continuous</td>
<td>8.00</td>
<td>225</td>
</tr>
</tbody>
</table>

When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a minimum pressure reading of 8 inches of water unless a different value is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across baghouse CE02-14, used in conjunction with the dry slag processing area, at least once per day when these units are in operation. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 4.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.12 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

(a) For a scrubber controlling emissions from a process operated continuously, a failed unit and the associated process will be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.13 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

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

D.1.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.10 - Visible Emissions Notations, the Permittee shall maintain a once per day record of visible emission notations of each of the stack exhausts from the scrubber, baghouse and each of the raw slag handling operations. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.1.11 (a) - Parametric Monitoring, the Permittee shall maintain the following parameters for the scrubber during normal operation:

(1) The pressure drop; and

(2) Flow rate.

(c) To document the compliance status with Condition D.1.11 (b) - Parametric Monitoring, the Permittee shall maintain a once per day record of the pressure drop during normal operation for the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that)

(d) Section C - General Record Keeping Requirements, of this permit contains the Permittee’s obligations with regard to the records required by this condition.
SECTION E.1  NSPS

Emissions Unit Description:

Natural Gas Fired Dryers

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

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

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

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart UUU (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above

1. 40 CFR 60.730
2. 40 CFR 60.732
3. 40 CFR 60.734
4. 40 CFR 60.735
5. 40 CFR 60.736
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: 
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Harsco Minerals
Source Address: 7100 W 9th Avenue, Gary, Indiana 46406
FESOP Permit No.: F089-40947-00107

This form consists of 2 pages

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

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
  - The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-8-12

If any of the following are not applicable, mark N/A
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time Emergency started:</td>
<td></td>
</tr>
<tr>
<td>Date/Time Emergency was corrected:</td>
<td></td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency?</td>
<td>Y</td>
</tr>
<tr>
<td>Describe:</td>
<td></td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
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<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
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<tr>
<td>Describe the steps taken to mitigate the problem:</td>
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</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
<td></td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
<td></td>
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<tr>
<td>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:</td>
<td></td>
</tr>
</tbody>
</table>

Form Completed by: ____________________________________________

Title / Position: ____________________________________________

Date: ____________________________________________

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

Source Name: Harsco Minerals
Source Address: 7100 W 9th Avenue, Gary, Indiana 46406
FESOP Permit No.: F089-40947-00107

Months: ___________ to ____________ Year: ______________

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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<tr>
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<td>Probable Cause of Deviation:</td>
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<td>Response Steps Taken:</td>
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<tr>
<td>Response Steps Taken:</td>
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</tr>
</tbody>
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Form Completed by:______________________________

Title / Position:______________________________

Date:_______________________________________

Phone:_______________________________________
Background

Fugitive dust sources of significance from this site can be categorized into the following areas:

1. Slag processing building and processing equipment;
2. Loadout;
3. Areas adjacent to slag processing areas;
4. Roadways;
5. Fines stockpiles; and
6. Inactive ground level areas not dedicated to any particular use.

Total site size is 36.4 acres unpaved with 10,560 yd² of unpaved roadway (.6mi. x 10 yds).

Plan of Control

A. Person responsible for plan implementation:

Plant Superintendent
7100 West 9th Avenue
Gary, Indiana
(219) 944-6250

B. Slag Processing Building and Processing Equipment Control Measures

1. Monthly visual inspections shall be conducted of all building enclosures, outside chutes, and outside elevators for openings, not in the original or custom design, greater than 2” in diameter. Any such openings must be closed within 4 business days. A record must be maintained of the date of the visual inspections, the resulting observations, and the date of any repair.

2. Slag processing building doors shall be kept closed (except for immediate access, maintenance, servicing, and cleaning activities).

3. Monthly visual inspections shall be conducted of process equipment and associated ductwork (while the equipment is in normal operation), that is required by the FESOP to be controlled by the baghouse for openings greater than 2” in diameter, not in the original or custom design, through which dust is exiting the process. Any such openings must be closed within 4 business days. A record must be maintained of the date of the visual inspections, the resulting observations, and date of any repair.

4. An annual evaluation shall be conducted inside the slag processing building to identify areas of concern for accumulation of dust that could become airborne and exit the building. Monthly visual inspections shall be conducted of these. Excess accumulated material that could become airborne and exit the building that is identified in monthly inspections shall be removed within 10 days. Areas identified in the annual evaluation that receive three consecutive monthly inspections with no accumulated dust may be removed from the list.
record must be maintained of the date of the annual and monthly inspections, the resulting observations, and all follow-up actions.

C. Loadout

1. For finished material loadout, drop-height shall be reduced by the use of the longest static tube from the bottom of each existing loadout hopper that can still clear the highest clearance receiving equipment, which is typically a railcar.

2. Monthly visual inspections shall be conducted of all loadout discharge pipes for openings, not in the original or custom design, greater than 2” in diameter. Any such openings must be closed within 4 business days. A record must be maintained of the date of the visual inspections, the resulting observations, and the date of any repair.

D. Outside Areas Adjacent to Slag Processing Buildings

1. Spills and other accumulated material from activities associated with slag processing shall be cleaned up promptly and the areas within 15 feet of the perimeter of buildings and equipment shall be kept at grade (except for material storage areas).

E. Roadway Control Measures

1. All active entrance roadways shall be clearly marked and traffic shall be restricted to controlled areas.

2. All vehicles shall not exceed 5 mph.

3. All active roadways shall be inspected daily to assure nominal thickness (2") of coarse aggregate oversize is maintained on all traffic areas. Required material shall be placed by an on-site front loader and/or dump truck. As an alternative to maintaining 2” coarse aggregate on roadways, a water truck can be used as needed to minimize fugitive dust.

4. Monthly representative incoming roadway (defined as gate to truck scale) aggregate samples shall be taken and analyzed to assure silt content (200 mesh) is less than 3%.

F. Fines stockpile control measures

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

1. Storage pile height shall be limited to 50 feet.

2. End loader bucket drop height shall be minimized to the lowest practical elevation.
3. Water shall be applied to fines stockpiles to control fugitive dust when necessary.

4. Water will not be applied to fines stockpiles when the following conditions prevail.
   a. During freezing weather, typically between October 15 and April 15.

5. RMD completed a “green belt” alternatives study for fugitive dust control as follows:
   a. Summer 1986 (June 1 – August 31) Select landscape consultant.
   b. Fall 1986 (September 1 – October 31) Implement vegetative growth test areas.
   c. Winter 1986 (November 1 – February 28) Inspect test areas, Document growth progress, Reseed winter damaged areas.
   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.

G. Open areas (Inactive)

1. All such classified areas shall be closed to truck traffic, except by special permit.

2. Natural vegetative encroachment shall 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 shall be covered with oversize aggregate, as set forth in the roadway control measures.

H. All employees shall be trained as to the contents of this Plan annually or as procedure changes are made to this Plan.

I. Fugitive dust controls shall be inspected for compliance with this Plan according to the following:

1. Slag Processing Building Control Measures
a. All slag processing building control measures outlined in this Plan shall be inspected at least monthly.

2. Loadout Control Measures
   a. All loadout control measures outlined in this Plan shall be inspected at least monthly.

3. Outside Areas Adjacent to Slag Processing Buildings
   a. All outside areas adjacent to slag processing buildings shall be inspected at least monthly.

4. Roadway Control Measures
   a. All roadway control measures shall be inspected at least monthly.

5. Fines stockpile control measures
   a. All fines and stockpile control measures shall be inspected at least monthly.

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

K. Plan Implementation

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

Date of update: May 31, 2012.
§ 60.731 Definitions.

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

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

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

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

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

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

Each owner or operator of any affected facility that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test required by § 60.8 is completed, but not later than 180 days after the initial startup, whichever date comes first. No emissions shall be discharged into the atmosphere from any affected facility that:

(a) Contains particulate matter in excess of 0.092 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)] for calciners and for calciners and dryers installed in series and in excess of 0.057 g/dscm (0.025 gr/dscf) for dryers; and

(b) Exhibits greater than 10 percent opacity, unless the emissions are discharged from an affected facility using a wet scrubbing control device.


§ 60.733 Reconstruction.

The cost of replacement of equipment subject to high temperatures and abrasion on processing equipment shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital cost that would be required to construct a comparable new facility” under § 60.15. Calciner and dryer equipment subject to high temperatures and abrasion are: end seals, flights, and refractory lining.

§ 60.734 Monitoring of emissions and operations.

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

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

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

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

§ 60.735 Recordkeeping and reporting requirements.

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

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

1. All 6-minute periods during which the average opacity from dry control devices is greater than 10 percent; or

2. Any daily 2-hour average of the wet scrubber pressure drop determined as described in § 60.735(b) that is less than 90 percent of the average value recorded according to § 60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard; or

3. Each daily wet scrubber liquid flow rate recorded as described in § 60.735(b) that is less than 80 percent or greater than 120 percent of the average value recorded according to § 60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard.

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

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

§ 60.736 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.732 as follows:

1. Method 5 shall be used to determine the particulate matter concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm.

2. Method 9 and the procedures in § 60.11 shall be used to determine opacity from stack emissions.

(c) During the initial performance test of a wet scrubber, the owner or operator shall use the monitoring devices of § 60.734(d) to determine the average change in pressure of the gas stream across the scrubber and the average flowrate of the scrubber liquid during each of the particulate matter runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of § 60.735(c).

§ 60.737 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.
Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>HARSCO Corporation - Reed Minerals Division</th>
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<tbody>
<tr>
<td>Source Location:</td>
<td>7100 West 9th Avenue, Gary, Indiana 46406</td>
</tr>
<tr>
<td>County:</td>
<td>Lake</td>
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<tr>
<td>SIC Code:</td>
<td>3295 (Minerals and Earths, Ground Or Otherwise Treated)</td>
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<tr>
<td>FESOP Renewal No.:</td>
<td>F089-40947-00107</td>
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<tr>
<td>Permit Reviewer:</td>
<td>Ojo Adu/ Carson Wright</td>
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On January 16, 2019 Harsco Minerals submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Harsco Minerals relating to the slag processing operation. Harsco Minerals was issued its First FESOP Renewal (089-27389-00107) on October 19, 2009.

Existing Approvals

The source was issued FESOP Renewal No. 089-27389-00107 on October 19, 2009. The source has since received the following approval:

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<thead>
<tr>
<th>Permit Type</th>
<th>Permit Number</th>
<th>Issuance Date</th>
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<tr>
<td>Administrative Amendment</td>
<td>089-29004-00107</td>
<td>March 3, 2010</td>
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<tr>
<td>Administrative Amendment</td>
<td>089-32180-00107</td>
<td>August 24, 2012</td>
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<tr>
<td>Administrative Amendment</td>
<td>089-32287-00107</td>
<td>October 11, 2012</td>
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<td>Administrative Amendment</td>
<td>089-34462-00107</td>
<td>July, 2, 2014</td>
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<tr>
<td>Administrative Amendment</td>
<td>089-38137-00107</td>
<td>March 22, 2017</td>
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All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) Plant 14 consisting of one (1) stationary slag processing plant, consists of the following:

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

(i) Three (3) crushers, identified as P03-14;
(ii) Eleven (11) screens, identified as P02-14;
(iii) Eight (8) bucket elevators, identified as M01-14;
(iv) One (1) conveying system, identified as M02-14, consisting of nine (9) conveyors;
(v) Six (6) blend silos, identified as M03-14;
(vi) Three (3) roofing silos, identified as M05-14;
(vii) Eight (8) blasting silos, identified as M04-14; and
(viii) One (1) chute to blasting silos, identified as M06-14.

(3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, consisting of the following:

(i) One (1) loading hopper;
(ii) Three (3) conveyor transfer points; and
(iii) One (1) initial screening operation;

(4) Three (3) chutes to bagging machines, identified as M07-14 through M09-14, exhausting indoors; and

(5) One (1) 20-ton silo, identified as M10-14, exhausting through bin vent S03-14.

### Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside.

(b) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture; and

(c) One (1) oversize storage pile with a maximum capacity of 20,000 tons.

(d) Five (5) slag storage tanks, constructed in 2004;

(e) Six (6) storage silos

(f) One (1) metallic materials storage pile, with maximum capacity of 73,000 tons, constructed in 2014;
(g) One (1) briquettes storage pile, with maximum capacity of 73,000 tons constructed in 2014;

(h) one (1) load out to truck via front end loader from metallic materials storage pile, constructed in 2014;

(i) One (1) load out to rail via front end loader from briquettes storage pile, constructed in 2014.

**Insignificant Activities**

The source also consists of the following insignificant activities:

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment;

(b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;

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

(d) Combustion source flame safety purging on startup;

(e) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

(f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(g) Refractory storage not requiring air pollution control equipment;

(h) Paved and unpaved roads and parking lots with public access;

(i) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(k) Purge double block and bleed valves;

(l) Other emission units, not regulated by a NESHAP, with PM10 and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) coal slag pile, with a maximum capacity of 500,000 tons;
(2) One (1) fines pile, with a maximum capacity of 200,000 tons;
(3) One (1) blast furnace slag pile;
(4) Two (2) temporary fines piles;
(5) Two (2) wet screws;
(6) Two (2) front end loading activities to move raw materials and fines;
(7) One (1) load out to truck;
(8) Eight (8) storage silos;
(m) One (1) bagging machine chute for loading jumbo sacks outdoor
(n) One (1) additives loading hopper located outdoors

Emission Units and Pollution Control Equipment
Constructed Under the Provisions of 326 IAC 2-1.1-3 (Exemptions)

As part of this permitting action, the source requested to add the following existing emission unit(s) constructed under the provisions of 326 IAC 2-1.1-3 (Exemptions):

(a) One (1) bagging machine chute for loading jumbo sacks outdoor
(b) One (1) additives loading hopper located outdoors

The total potential to emit of the emission units is less than levels specified at 326 IAC 2-1.1-3(e)(1)(A) through (G) and the addition of the emission unit(s) did not require the source to transition to a higher operation permit level. Therefore, pursuant to 326 IAC 2-1.1-3(e).

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

County Attainment Status

The source is located in Lake County.

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<tr>
<th>Pollutant</th>
<th>Status and Effective Date</th>
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<tbody>
<tr>
<td>CO</td>
<td>Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.</td>
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<tr>
<td>O₃</td>
<td>Moderate nonattainment effective June 3, 2016, for the 2008 8-hour ozone standard.¹</td>
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<tr>
<td>O₃</td>
<td>Nonattainment effective August 3, 2018, for the 2015 8-hour ozone standard for Calumet, Hobart, North, Ross, and St. John townships. Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard for the remainder of the county.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.</td>
</tr>
</tbody>
</table>
NO\textsubscript{2} & Unclassifiable or attainment effective January 29, 2012, for the 2010 NO\textsubscript{2} standard. \\
\textsuperscript{1}Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard, which was revoked effective June 15, 2005. The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3 for the 1-hour standard. \\
Pb & Unclassifiable or attainment effective December 31, 2011 for the 2008 lead standard.

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 34228 dated June 11, 2012, designated Lake County as nonattainment for the 2008 8-hour ozone standard. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to assure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO\textsubscript{x}) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO\textsubscript{x} emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO\textsubscript{x} emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) PM\textsubscript{2.5}
Lake County has been classified as attainment for PM\textsubscript{2.5}. Therefore, direct PM\textsubscript{2.5}, SO\textsubscript{2}, and NO\textsubscript{x} emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions
Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions
On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted
under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Criteria Pollutants</th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹,₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nat Gas Combustion from Dryer</td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.59</td>
<td>0.64</td>
<td>9.74</td>
<td>0.21 (Hexane)</td>
<td>0.22</td>
</tr>
<tr>
<td>Slag Drying Process</td>
<td>412.82</td>
<td>455.52</td>
<td>455.52</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enclosed Dry Slag Processing</td>
<td>429.46</td>
<td>503.74</td>
<td>503.74</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td>3.56</td>
<td>2.48</td>
<td>2.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conveyor Transfer Point</td>
<td>2.56</td>
<td>0.94</td>
<td>0.94</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Screening</td>
<td>7.12</td>
<td>2.48</td>
<td>2.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bagging</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additives</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cleaners and Solvents</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.005 (Xylene)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Total PTE of Entire Source Excluding Fugitives* | 857.44 | 966.66 | 966.67 | 0.07 | 11.59 | 0.64 | 9.74 | 0.21 (Hexane) | 0.23 |

Unpaved Roads Fugitive | 33.98 | 6.33  | 0.63    | -    | -    | -    | -    | -          | -          |

Storage Piles Fugitive | 1.01 | 0.48  | 0.07    | -    | -    | -    | -    | -          | -          |

Total PTE of Entire Source Including Fugitive | 892.43 | 973.47 | 967.37 | 0.07 | 11.59 | 0.64 | 9.74 | 0.21 (Hexane) | 0.23 |

Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 10 | 25 |

PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | -- | -- |

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a “regulated air pollutant.”
²PM₂.₅ listed is direct PM₂.₅.
³Single highest source-wide HAP
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.
(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM is greater than twenty-five (25) tons per year. PM10 and PM2.5 is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5 emissions to less than Title V major source thresholds. Therefore, the source will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all other criteria pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

**Potential to Emit After Issuance**

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

<table>
<thead>
<tr>
<th>Process/ Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Worst Single HAP</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14 NG Combustion from Dryer</td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.59</td>
<td>0.64</td>
<td>9.74</td>
<td>0.21 (Hexane)</td>
<td>0.22</td>
</tr>
<tr>
<td>Plant 14 Slag Drying Process</td>
<td>30.66</td>
<td>30.66</td>
<td>30.66</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Plant 14 Enclosed Dry Slag Processing</td>
<td>30.66</td>
<td>30.66</td>
<td>30.66</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td>3.56</td>
<td>2.48</td>
<td>2.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conveyor Transfer Point</td>
<td>2.19</td>
<td>2.19</td>
<td>0.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Screening</td>
<td>4.38</td>
<td>4.38</td>
<td>2.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Coal) Fugitive Emissions Unpaved Roads</td>
<td>33.98</td>
<td>6.33</td>
<td>0.63</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Coal) Fugitive Emissions Storage Piles</td>
<td>1.01</td>
<td>0.48</td>
<td>0.07</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bagging</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additives</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.005 (Xylene)</td>
<td>0.005</td>
</tr>
<tr>
<td>Cleaners and Solvents</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.21 Hexane</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>108.37</td>
<td>78.68</td>
<td>68.68</td>
<td>0.07</td>
<td>11.83</td>
<td>0.65</td>
<td>9.93</td>
<td>0.21</td>
<td>0.23</td>
</tr>
</tbody>
</table>
Under the Part 70 Permit program (40 CFR 70), PM\textsubscript{10} and PM\textsubscript{2.5}, not particulate matter (PM), are each considered as a "regulated air pollutant."

PM\textsubscript{2.5} listed is direct PM\textsubscript{2.5}.

Single highest source-wide HAP.

Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3 because VOC and NO\textsubscript{x}, nonattainment regulated pollutants, are each not emitted at a rate of 100 tons per year or more.

(c) This source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

**New Source Performance Standards (NSPS):**

(a) The one (1) natural gas-fired rotary dryer identified as P01-14 is subject to the New Source Performance Standards for Subpart UUU 40 CFR 60, Subpart UUU and 326 IAC 12, because this source is considered a mineral processing plant, as determined in the original FESOP permit number 089-16214-00107, issued August 9, 2004. And the dryers are listed as affected units and were constructed after the applicability date of April 23, 1986. The unit subject to this rule includes the following:

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

The emission unit, identified as P01-14 is subject to the following portions of 40 CFR 60, Subpart UUU.

(1) 40 CFR 60.730
(2) 40 CFR 60.732
(3) 40 CFR 60.734
(4) 40 CFR 60.735
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emission unit except as otherwise specified in 40 CFR 60, Subpart UUU.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP):

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

Compliance Assurance Monitoring (CAM):

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

State rule applicability for this source has been reviewed as follows:

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

The source is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 (Prevention of Significant Deterioration). Although the source has an uncontrolled potential to emit in excess of two hundred fifty (250) tons per year of PM, the source has agreed to limit the PTE of PM to less than two hundred fifty (250) tons per year.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:
<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7.0</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14)</td>
<td></td>
</tr>
<tr>
<td>Crushers P03-14</td>
<td></td>
</tr>
<tr>
<td>Screens P02-14</td>
<td></td>
</tr>
<tr>
<td>(all controlled by Baghouse C02-14):</td>
<td></td>
</tr>
<tr>
<td>Bucket elevators (8)</td>
<td>7.0</td>
</tr>
<tr>
<td>M01-14</td>
<td></td>
</tr>
<tr>
<td>Conveyors (9)</td>
<td></td>
</tr>
<tr>
<td>M02-14</td>
<td></td>
</tr>
<tr>
<td>Blend Silos (6)</td>
<td></td>
</tr>
<tr>
<td>M03-14</td>
<td></td>
</tr>
<tr>
<td>Roofing Silos (3)</td>
<td></td>
</tr>
<tr>
<td>M05-14</td>
<td></td>
</tr>
<tr>
<td>Blasting Silos (8)</td>
<td></td>
</tr>
<tr>
<td>M04-14a</td>
<td></td>
</tr>
<tr>
<td>Chute to Blasting Silo</td>
<td></td>
</tr>
<tr>
<td>M06-14</td>
<td></td>
</tr>
<tr>
<td>Each Conveyor Transfer Point TP01-14</td>
<td>0.5</td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Compliance with these limits, combined with the PM, emissions from Plant 14, and the insignificant activities, shall limit the source-wide potential to emit of PM to less than 250 tons per year, and shall render the requirements of 326 IAC 2-2 (PSD), not applicable to this source.

Note: The Slag Drying Process (rotary dryer) and enclosed Dry slag process limits have increased from 3.5 to 7.0 pounds per hour in FESOP renewal No. F089-40947-00107.

**326 IAC 2-3 (Emission Offset)**

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

Pursuant to permit Operating number F089-16215-00107 issued on August 9, 2004, the source had an uncontrolled potential to emit PM$_{10}$, and PM$_{2.5}$ greater than one hundred (100) tons per year, each. Therefore, in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:
In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM10 Limit (pounds per hour)</th>
<th>PM2.5 Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14)</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Crushers P03-14 Screens P02-14</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>(all controlled by Baghouse C02-14): Bucket elevators (8) M01-14 Conveyors (9) M02-14 Blend Silos (6) M03-14 Roofing Silos (3) M05-14 Blasting Silos (8) M04-14a Chute to Blasting Silo M06-14</td>
<td>0.5</td>
<td>0.11</td>
</tr>
<tr>
<td>Each Conveyor Transfer Point TP01-14</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Compliance with these limits, combined with the PM10 and PM2.5 emissions from Plant 14, and the insignificant activities, shall limit the source-wide potential to emit of PM10 and PM2.5 to less than 100 tons per year, each, and shall render the requirements of 326 IAC 2-3 (Emission Offset), not applicable to this source.

Note: The Slag Drying Process (rotary dryer) and enclosed Dry slag process limits have increased from 3.5 to 7.0 pounds per hour in FESOP renewal No. F089-40947-00107.

326 IAC 2-8-4 (FESOP)

The uncontrolled PM$_{10}$ and PM$_{2.5}$ emissions are more than 100 tons per year for this source. Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall limit PM$_{10}$ and PM$_{2.5}$ emissions from the entire source to less than one hundred (100) tons per year.

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits), not applicable, the Permittee shall comply with the following:
<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM10 Limit (pounds per hour)</th>
<th>PM2.5 Limit (pounds per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying Process (Rotary Dryer, P01-14 with wet scrubber, CE01-14)</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Enclosed Dry Slag Process (all controlled by Baghouse C02-14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crushers P03-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screens P02-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(all controlled by Baghouse C02-14):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bucket elevators (8)</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>M01-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conveyors (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M02-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blend Silos (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M03-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing Silos (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M05-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blasting Silos (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M04-14a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chute to Blasting Silo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M06-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each Conveyor Transfer Point</td>
<td>0.5</td>
<td>0.11</td>
</tr>
<tr>
<td>TP01-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Screening IS01-14</td>
<td>1.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

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

Note: The Slag Drying Process (rotary dryer) and enclosed Dry slag process limits have increased from 3.5 to 7.0 pounds per hour in FESOP renewal No. F089-40947-00107.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(2)

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

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
This source (located in Lake County) is not one of the sources specifically listed in 326 IAC 6.8-4, 326 IAC 6.8-5, or 326 IAC 6.8-8 through 326 IAC 6.8-11. The source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.8-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.
326 IAC 6.8-2-29 (Particulate Matter Limitations)
The following are specifically listed under 326 IAC 6.8-2-29 limited as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>PM Emission Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gr/dscf</td>
</tr>
<tr>
<td>Crushing identified as P03-14a and Screening identified as P02-14a</td>
<td>0.015</td>
</tr>
</tbody>
</table>

326 IAC 6.8-2-1 (Particulate Matter Limitations)
Enclosed dry slag process
This enclosed dry slag processing was incorrectly subject to both 326 IAC 6.8-2-1(a) and 326 IAC 6.8-2-29. This unit is not specifically listed in 326 IAC 6.8-2-29. Therefore, this operation must only be subject to the grain loading limit of three-hundredths (0.03) grain per dry standard cubic foot (dscf) in 326 IAC 6.8-2-1(a).

Buckect elevators (8)-M01-14a, Conveyors (9)-M02-14a, Blend Silos (6)-M03-14a, Roofing Silos (3)-M05-14a, Blasting Silos (8)-M04-14a, Chute to Blasting Silo-M06-14 These units are also subject to grain loading limit of three-hundredths (0.03) grain per dry standard cubic foot (dscf) in 326 IAC 6.8-2-1(a), since they are not specifically listed under 326 IAC 6.8-2-29.

326 IAC 6.8 (Lake County: Fugitive Particulate Matter)
This source (located in Lake County) is a source specifically listed in 326 IAC 6.8-10-1(2)(3). Therefore, this source is subject to the requirements of 326 IAC 6.8-10.

(a) Pursuant to 326 IAC 6.8-10-3, the particulate matter emissions from source wide activities shall meet the following requirements:

  (1) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
  (2) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
  (3) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.
  (4) 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.
  (5) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
  (6) 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.
  (7) 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%).
  (8) Material processing facilities shall include the following:

      (A) 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.
(B) 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.

(C) The PM10 stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(D) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(E) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(9) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(10) Material transfer limits shall be as follows:

(A) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(B) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(C) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:

(i) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

(ii) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

(11) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The rotary dryer, identified as P01-14 is not subject to 326 IAC 7-1.1 because it has a potential to emit sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

Compliance Determination and Monitoring Requirements
Permits issued under 326 IAC 2-8 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions
that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

(a) The Compliance Determination Requirements applicable to this source are as follows:

**Testing Requirements:**

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing or Date of Initial Valid Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Slag Process (Rotary Dryer)</td>
<td>Wet Scrubber, P01-14</td>
<td>5 years from the last valid test</td>
<td>PM, PM2.5, PM10</td>
<td>Every 5 years</td>
<td>326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-8</td>
</tr>
<tr>
<td>Enclosed Dry Slag and associated processes</td>
<td>Baghouse C02-14</td>
<td>5 years from the last valid test</td>
<td>PM, PM2.5, PM10</td>
<td>Every 5 years</td>
<td>326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-8</td>
</tr>
</tbody>
</table>

(b) The Compliance Monitoring and Determination Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Control/Unit</th>
<th>Type of Monitoring</th>
<th>Frequency</th>
<th>Range/Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14 Scrubber CE01-14/ Dry Slag Process (Rotary Dryer)</td>
<td>Pressure Drop</td>
<td>Continuous</td>
<td>8.00 inches of water unless a different value is established in the most recent compliant stack test</td>
</tr>
<tr>
<td></td>
<td>Liquid flow rate</td>
<td>Continuous</td>
<td>Flow rate of 225 gallons per minute unless a different value is established in the most recent compliant stack test</td>
</tr>
<tr>
<td></td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Normal or Abnormal</td>
</tr>
<tr>
<td>Baghouse/ Enclosed Slag processing</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Normal or Abnormal</td>
</tr>
<tr>
<td></td>
<td>Pressure Drop</td>
<td>Daily</td>
<td>4.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.</td>
</tr>
</tbody>
</table>
Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 16, 2019.

The operation of this slag processing plants shall be subject to the conditions of the attached proposed FESOP Renewal No. 089-40947-00107.

The staff recommends to the Commissioner that the FESOP Renewal be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Carson Wright, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-6610 or (800) 451-6027, and ask for Carson Wright or (317) 233-6610.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.
## Appendix A: Emissions Calculations
### Entire Source Emission Unit Summary

**Using Stack Test Data for Emission Factors**

**Company Name:** Harsco Corp. - Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-40947-00107  
**Reviewer:** Ojo Adu/ Carson Wright

### Process ID

<table>
<thead>
<tr>
<th>Process ID</th>
<th>PM</th>
<th>PM</th>
<th>PM</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>CO</th>
<th>VOC</th>
<th>Single HAP</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Combustion</td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.59</td>
<td>9.74</td>
<td>0.64</td>
<td>0.31</td>
<td>Hexane 0.22</td>
</tr>
<tr>
<td>Slag Drying Process</td>
<td>412.82</td>
<td>455.52</td>
<td>455.52</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enclosed Dry Slag Processing</td>
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<td>505.74</td>
<td>505.74</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td>3.56</td>
<td>2.48</td>
<td>2.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conveyor Transfer Point</td>
<td>4.36</td>
<td>0.84</td>
<td>0.84</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Screening</td>
<td>7.45</td>
<td>4.66</td>
<td>4.66</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unpaved Roads Fugitive</td>
<td>35.98</td>
<td>6.83</td>
<td>6.83</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bagging</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additives Loading</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Solvent</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.005</td>
<td>Xylene 0.005</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>892.43</td>
<td>973.47</td>
<td>967.37</td>
<td>0.07</td>
<td>11.59</td>
<td>9.74</td>
<td>0.64</td>
<td>0.21</td>
<td>Hexane 0.23</td>
</tr>
</tbody>
</table>

### Limited Potential Emissions (tons/year)

<table>
<thead>
<tr>
<th>Process ID</th>
<th>PM</th>
<th>PM</th>
<th>PM</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>CO</th>
<th>VOC</th>
<th>Single HAP</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Combustion</td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.59</td>
<td>9.74</td>
<td>0.64</td>
<td>0.31</td>
<td>Hexane 0.22</td>
</tr>
<tr>
<td>Slag Drying Process</td>
<td>30.66</td>
<td>30.66</td>
<td>30.66</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Enclosed Dry Slag Processing</td>
<td>34.66</td>
<td>30.66</td>
<td>30.66</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td>3.56</td>
<td>2.48</td>
<td>2.48</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Conveyor Transfer Point</td>
<td>2.19</td>
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<td>2.19</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Screening</td>
<td>4.38</td>
<td>4.38</td>
<td>4.38</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unpaved Roads Fugitive</td>
<td>33.98</td>
<td>6.83</td>
<td>6.83</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bagging</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additives Loading</td>
<td>0.85</td>
<td>0.31</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Solvent</td>
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<td>-</td>
<td>-</td>
<td>0.005</td>
<td>Xylene 0.005</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>105.37</td>
<td>79.58</td>
<td>68.58</td>
<td>0.07</td>
<td>11.59</td>
<td>9.74</td>
<td>0.64</td>
<td>0.21</td>
<td>Xylene 0.23</td>
</tr>
</tbody>
</table>

1. Limited in order to render the requirements of 326 IAC 2-2 (PSD) not applicable.  
2. Limited in order to render the requirements of 326 IAC 2-3 (Emissions Offset) not applicable. This limit was established in FESOP No. 089-16215-00107 issued on August 9, 2004.  
3. Limited in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.
# Appendix A: Emissions Calculations

## Slag Drying Process

<table>
<thead>
<tr>
<th>Process</th>
<th>Controlled Emission Factor PM (lb/ton)</th>
<th>Throughput (ton/hr)</th>
<th>Scrubber EFF</th>
<th>Controlled Emission PM (ton/yr)</th>
<th>Controlled Emission PM10 (ton/yr)</th>
<th>Controlled Emission PM2.5 (ton/yr)</th>
<th>Uncontrolled Emission PM (ton/yr)</th>
<th>Uncontrolled Emission PM10 (ton/yr)</th>
<th>Uncontrolled Emission PM2.5 (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag Drying</td>
<td>0.029</td>
<td>65</td>
<td>98</td>
<td>8.26</td>
<td>9.11</td>
<td>9.11</td>
<td>412.82</td>
<td>455.52</td>
<td>455.52</td>
</tr>
<tr>
<td>Total Emission</td>
<td>8.256</td>
<td>9.11</td>
<td>9.11</td>
<td>412.82</td>
<td>455.52</td>
<td>455.52</td>
<td>30.66</td>
<td>30.66</td>
<td>30.66</td>
</tr>
</tbody>
</table>

Note: Emission Factors were derived from stack testing done on December 18, 2017, on the drying process using rotary dryer. Operating at 51 ton/hr control by the scrubber. Controlled PM emission was measured at 1.48 lbs/hr. Controlled PM 10 and PM 2.5 were measured at the same 1.48 lbs/hr.

**Methodology**

Controlled Emission (ton/yr) = Ef (lb/ton) x throughput (ton/hr) x 8760(hr/yr) x 2000(lb/ton)

Uncontrolled Emission (ton/yr) = Controlled Emission (ton/yr) / 0.995
### Plant 14

<table>
<thead>
<tr>
<th>Process</th>
<th>Max. Throughput (t/hr)</th>
<th>Number of Units</th>
<th>PM10, PM2.5 Emission Factor (lbs/ton)</th>
<th>PM10, PM2.5 before Control (lbs/hr/unit)</th>
<th>PM2.5 before Control (tons/hr/unit)</th>
<th>PM Emission Factor (lbs/ton)</th>
<th>PTE of PM before Control (tons/yr)</th>
<th>Control Efficiency</th>
<th>PTE of PM10, PM2.5 after Control (tons/yr)</th>
<th>PTE of PM after Control (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enclosed Dry Slag Processing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crushers (P03-14)</td>
<td>65</td>
<td>3</td>
<td>0.0024</td>
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<td>28.51</td>
<td>0.0054</td>
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<td>24.31</td>
<td>99.5%</td>
<td>0.14</td>
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<tr>
<td>Conveyor and Chute Transfer</td>
<td>65</td>
<td>13</td>
<td>0.0011</td>
<td>2.17</td>
<td>123.56</td>
<td>0.0030</td>
<td>1.85</td>
<td>105.34</td>
<td>99.5%</td>
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</tr>
<tr>
<td>Bucket Elevators</td>
<td>65</td>
<td>8</td>
<td>0.0011</td>
<td>2.17</td>
<td>76.04</td>
<td>0.0030</td>
<td>1.85</td>
<td>64.82</td>
<td>99.5%</td>
<td>0.38</td>
</tr>
<tr>
<td>Silos</td>
<td>65</td>
<td>18</td>
<td>0.0011</td>
<td>2.17</td>
<td>171.08</td>
<td>0.0030</td>
<td>1.85</td>
<td>145.85</td>
<td>99.5%</td>
<td>0.86</td>
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<td><strong>Total</strong></td>
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<td><strong>Raw Slag Handling</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Loading Hopper LH01-14</td>
<td>65</td>
<td>1</td>
<td>0.0087</td>
<td>0.57</td>
<td>2.48</td>
<td>0.0125</td>
<td>0.81</td>
<td>3.56</td>
<td>0%</td>
<td>2.48</td>
</tr>
<tr>
<td>Conveyor Transfer Point</td>
<td>65</td>
<td>3</td>
<td>0.0011</td>
<td>0.07</td>
<td>0.94</td>
<td>0.0030</td>
<td>0.20</td>
<td>2.56</td>
<td>0%</td>
<td>0.94</td>
</tr>
<tr>
<td>Screening</td>
<td>65</td>
<td>1</td>
<td>0.0087</td>
<td>0.57</td>
<td>2.48</td>
<td>0.0125</td>
<td>0.81</td>
<td>3.56</td>
<td>0%</td>
<td>2.48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
<th>Max. Throughput (t/hr)</th>
<th>Number of Units</th>
<th>PM10, PM2.5 Emission Factor (lbs/ton)</th>
<th>PM10, PM2.5 before Control (lbs/hr/unit)</th>
<th>PM2.5 before Control (tons/hr/unit)</th>
<th>PM Emission Factor (lbs/ton)</th>
<th>PTE of PM before Control (tons/yr)</th>
<th>Control Efficiency</th>
<th>PTE of PM10, PM2.5 after Control (tons/yr)</th>
<th>PTE of PM after Control (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
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</tr>
</tbody>
</table>

1. *(1) PM, PM10, and PM2.5 emission factors are from Stack Test Results October 17, 2006 for Plant 24 Slag Processing.
2. *(2) PM, PM10, and PM2.5 emission factors are from Stack Test Results October 17, 2006 for Plant 24 Slag Processing.
3. No Emission Factors for PM2.5 for these operations; therefore, PM 2.5 is presumed to be the same as PM10.

**Methodology**

- \( \text{PTE before Control (lbs/hr/unit)} = \text{Maximum Throughput (tons/hr)} \times \text{Emission Factor (lbs/ton)} \)
- \( \text{PTE before Control (tons/yr)} = \text{Maximum Throughput (tons/hr)} \times \text{Emission Factor (lbs/ton)} \times \text{Number of Units} \times 8760 \text{ hr/yr} \times 1 \text{ ton/2000 lbs} \)

PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.
Appendix A: Emission Calculations
PM and PM10 Emissions
From the Storage Piles (Fugitive Emissions) - Entire Source

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave, Gary, IN 46406
Permit #: 089-40947-00107
Reviewer: Ojo Adu/ Carson Wright

1. Emission Factors:

According to AP42, Chapter 13.2.4 - Aggregate Handling and Storage Piles (11/06), the PM/PM10/PM2.5 emission factors for aggregate handling process can be estimated from the following equation:

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

where:

- $Ef$ = Emission Factor (lbs/ton)
- $k$ = Particle size multipliers = 0.74 for PM, 0.35 for PM10, and 0.053 for PM2.5
- $U$ = Mean wind speed (mph) = 12 mph
- $M$ = Moisture content (%) = 4 % (provided by the source)

Therefore,

- PM Emission Factor = 0.0028 lbs/ton
- PM10 Emission Factor = 0.0013 lbs/ton
- PM2.5 Emission Factor = 0.0002 lbs/ton

2. Potential to Emit PM/PM10 before Control:

<table>
<thead>
<tr>
<th></th>
<th>Coal Slag</th>
<th>Fines</th>
<th>Oversize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons Piled:</td>
<td>500,000</td>
<td>200,000</td>
<td>20,000</td>
</tr>
<tr>
<td>(tons/year)</td>
<td>(lb/day)</td>
<td>(tons/year)</td>
<td>(lb/day)</td>
</tr>
<tr>
<td>Potential PM:</td>
<td>0.700</td>
<td>5.39</td>
<td>0.280</td>
</tr>
<tr>
<td>Potential PM10:</td>
<td>0.331</td>
<td>2.55</td>
<td>0.132</td>
</tr>
<tr>
<td>Potential PM2.5:</td>
<td>0.050</td>
<td>0.38</td>
<td>0.020</td>
</tr>
</tbody>
</table>

PTE (tons/yr) = Size of pile (tons/yr) * Emission Factor (lb/ton) * 1 ton/2000lbs.

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>lb/day: Calculation based on 260 operating days per year.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
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<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Potential PM tons/yr</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Total Potential PM10 tons/yr</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Total Potential PM2.5 tons/yr</td>
<td>0.07</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Emission Calculations

Insignificant Activities

Bagging machine chute and additives loading hopper

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave, Gary, IN 46406
Permit #: 089-40947-00107
Reviewer: Ojo Adu/ Carson Wright

<table>
<thead>
<tr>
<th>Process</th>
<th>Emission Factor PM (lb/ton)</th>
<th>PM10/PM2.5(lb/ton)</th>
<th>Throughput (ton/hr)</th>
<th>PM PTE ton/yr</th>
<th>PM10 PTE ton/yr</th>
<th>PM2.5 PTE ton/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagging</td>
<td>0.003</td>
<td>0.0011</td>
<td>65</td>
<td>0.854</td>
<td>0.31</td>
<td>0.31</td>
</tr>
<tr>
<td>Additives</td>
<td>0.003</td>
<td>0.0011</td>
<td>65</td>
<td>0.854</td>
<td>0.31</td>
<td>0.31</td>
</tr>
<tr>
<td>Total PTE</td>
<td></td>
<td></td>
<td></td>
<td>1.708</td>
<td>0.63</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Methodology

Emission (ton/yr) = Ef (lb/ton) x throughput (ton/hr) x 8760hr/yr)/2000lb/ton
Appendix A: Emission Calculations

HAP Emission Calculations

Company Name: HARSCO Corporation - Reed Minerals Division
Address City IN Zip: 7100 West 9th Avenue, Gary, Indiana 46406
Permit #: 089-40947-00107
Reviewer: Ojo Adu/ Carson Wright

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (Lb/Gal)</th>
<th>Gallons of Material (gal/unit)</th>
<th>Maximum (unit/hour)</th>
<th>Weight % Xylene</th>
<th>Xylene Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9 Naphthenes</td>
<td>6.62</td>
<td>1.000000</td>
<td>0.0166</td>
<td>1.00%</td>
<td>0.0048</td>
</tr>
</tbody>
</table>

Total Potential Emissions 0.0048 tons per year

METHODOLOGY
Per 40 CFR 63, Table 1, Naphthene, CAS No. 8052-41-3 (Stoddard Solvent) contains 1% xylene
Maximum per hour is based on maximum usage of 145 gallons per year divided by 8760 hours.

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs
### Appendix A: Particulate & VOC Emission Calculations

**Natural Gas Dryer**

**Plant 14**

Company Name: Harsco Corp. - Reed Minerals Division  
Address: 7100 West 9th Avenue, Gary, Indiana 46406  
Permit No.: 089-40947-00107  
Reviewer: Ojo Adu/ Carson Wright

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>PM2.5</th>
<th>**SO2</th>
<th>**NOx</th>
<th>**VOC</th>
<th>**CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>100</td>
<td>5.5</td>
<td>84.0</td>
</tr>
<tr>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
<td>(lbs/MMCF)</td>
</tr>
<tr>
<td>PTE (tons/year)</td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.6</td>
<td>0.54</td>
<td>9.74</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32**

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

### Methodology

All emission factors are based on normal firing.  

MMBtu = 1,000,000 Btu  
MMSCF = 1,000,000 Cubic Feet of Gas  

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.000243</td>
<td>0.000139</td>
<td>0.008696</td>
<td>0.208694</td>
<td>0.000394</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Zinc</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>2.9E-02</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.003362</td>
<td>0.000128</td>
<td>0.000162</td>
<td>0.000044</td>
<td>0.000243</td>
</tr>
</tbody>
</table>

**Total HAPs = 0.222 tpy**

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Appendix A: Emission Calculations
Fugitive Emissions
From the Unpaved Roads - Entire Source

Company Name: Harsco Corp. - Reed Minerals Division
Address: 7100 W. 9th Ave, Gary, IN 46406
Permit #: 089-40947-00107
Reviewer: Ojo Adu/ Carson Wright

1. Emission Factors:
According to AP42, Chapter 13.2.2.2 - Unpaved Roads (AP-42, 11/06), the PM/PM10/PM2.5 emission factors from the unpaved roads can be estimated from the following equation:

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

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

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

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

- PM2.5 Emission Factor = \( 0.15 \times (1/12)^{0.9} \times (38.5/3)^{0.45} \times (365-120) \)
  \[ \frac{365}{365} \]
  = 0.03 lbs/mile

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

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>*Ave Weight of Vehicles (tons)</th>
<th>*Trip Number (trips/hr)</th>
<th>*One-Way Distance (mile/trip)</th>
<th>Vehicle Mile Traveled (VMT) (miles/yr)</th>
<th>Traffic Component (%)</th>
<th>Component Vehicle Weight (tons)</th>
<th>PTE of PM before Control (tons/yr)</th>
<th>PTE of PM10 before Control (tons/yr)</th>
<th>PTE of PM2.5 before Control (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Carriers</td>
<td>40.0</td>
<td>1.6</td>
<td>0.40</td>
<td>21,725</td>
<td>58.2%</td>
<td>12.0</td>
<td>19.8</td>
<td>3.68</td>
<td>0.37</td>
</tr>
<tr>
<td>Dump Trucks</td>
<td>40.0</td>
<td>3.1</td>
<td>0.50</td>
<td>21,725</td>
<td>58.2%</td>
<td>12.0</td>
<td>19.8</td>
<td>3.68</td>
<td>0.37</td>
</tr>
<tr>
<td>Dump Trucks</td>
<td>27.5</td>
<td>1.0</td>
<td>0.25</td>
<td>4,390</td>
<td>11.7%</td>
<td>3.32</td>
<td>3.99</td>
<td>0.74</td>
<td>0.07</td>
</tr>
<tr>
<td>Total</td>
<td>37,318</td>
<td>2.3</td>
<td></td>
<td></td>
<td>100%</td>
<td>38.5</td>
<td>34.8</td>
<td>6.33</td>
<td>0.63</td>
</tr>
</tbody>
</table>

* 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
October 16, 2019

Milan Crncevic
Harsco Minerals
7100 West 9th Avenue
Gary, Indiana 46406

Re: Public Notice
Harsco Minerals
Permit Level: FESOP Renewal
Permit Number: 089-40947-00107

Dear Milan Crncevic:

Enclosed is a copy of your draft FESOP Renewal, Technical Support Document, emission calculations, and the Public Notice.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Gary Public Library and Cultural Center, 220 West 5th Avenue in Gary, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Carson Wright, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-6610 or dial (317) 233-6610.

Sincerely,

John F. Jackson
John F. Jackson
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 4/12/19
October 16, 2019

To: Gary Public Library and Cultural Center

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Harsco Minerals
Permit Number: 089-40947-00107

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

October 16, 2019
Harsco Minerals
089-40947-00107

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/5474.htm.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 4/12/2019
## Mail Code 61-53

<table>
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<th>Type of Mail: CERTIFICATE OF MAILING ONLY</th>
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<td>JJACKSON 10/16/2019 Harso Minerals 089-40947-00107 (DRAFT)</td>
<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
<td>AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING</td>
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<th>Insured Value</th>
<th>Due Send if COD</th>
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<th>S.H. Fee</th>
<th>Rest. Del. Fee</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Milan Crncevic Harso Minerals 7100 W 9th Ave Gary IN 46406 (Source CAATS)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2</td>
<td></td>
<td>Misty Stiffler Operations Manager Harso Minerals 350 Poplar Church Rd Camp Hill PA 17011 (RO CAATS)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td></td>
<td>Gary Mayors Office 401 Broadway # 102 Gary IN 46402 (Local Official)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td></td>
<td>Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)</td>
<td></td>
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<td>5</td>
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<td>WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)</td>
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<td>6</td>
<td></td>
<td>Lowell Town Council and Town Manager PO Box 157, 501 East Main Street Lowell IN 46356 (Local Official)</td>
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<td>7</td>
<td></td>
<td>Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)</td>
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<td></td>
<td>Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)</td>
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<td>9</td>
<td></td>
<td>Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)</td>
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<td>10</td>
<td></td>
<td>Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)</td>
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<td>11</td>
<td></td>
<td>Mr. Robert Garcia 3733 Parish Avenue East Chicago IN 46312 (Affected Party)</td>
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<td>12</td>
<td></td>
<td>Ms. Karen Kroczen 8212 Madison Ave Munster IN 46321-1627 (Affected Party)</td>
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<td>13</td>
<td></td>
<td>Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)</td>
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<td>14</td>
<td></td>
<td>Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)</td>
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<td>15</td>
<td></td>
<td>City of Gary Dept. of Environmental Affairs 839 Broadway SuiteN206 Gary IN 46402 (Local Official)</td>
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The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on insured and COD mail. See International Mail Manual for limitations on coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
# Mail Code 61-53

**IDEM Staff**  
**JACKSON 10/16/2019**  
**Harsco Minerals 089-40947-00107 (DRAFT)**  

<table>
<thead>
<tr>
<th>Name and address of Sender</th>
<th>Type of Mail:</th>
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<tbody>
<tr>
<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
<td>CERTIFICATE OF MAILING ONLY</td>
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<table>
<thead>
<tr>
<th>Line</th>
<th>Article Number</th>
<th>Name, Address, Street and Post Office Address</th>
<th>Postage</th>
<th>Handing Charges</th>
<th>Act. Value (If Registered)</th>
<th>Insured Value</th>
<th>Due Send if COD</th>
<th>R.R. Fee</th>
<th>S.D. Fee</th>
<th>S.H. Fee</th>
<th>Rest. Del. Fee</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Larry 268 South, 600 West Hebron IN 46341 (Affected Party)</td>
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<td>2</td>
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<td>Gary Public Library - Main Branch 220 West 5th Avenue Gary IN 46402 (Library)</td>
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<td>3</td>
<td></td>
<td>Mark Coleman PO Box 85 Beverly Shores IN 46301-0085 (Affected Party)</td>
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<td>4</td>
<td></td>
<td>Mr. James Hauck Hatchett &amp; Hauck LLP 150 West Market Street, Suite 200 Indianapolis IN 46204 (Attorney)</td>
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<td>5</td>
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<td>Jeff Mayes News-Dispatch 422 Franklin St Michigan City IN 46360 (Affected Party)</td>
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<thead>
<tr>
<th>Total number of pieces Listed by Sender</th>
<th>Total number of Pieces Received at Post Office</th>
<th>Postmaster, Per (Name of Receiving employee)</th>
<th>Remarks</th>
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